

FIG. 1

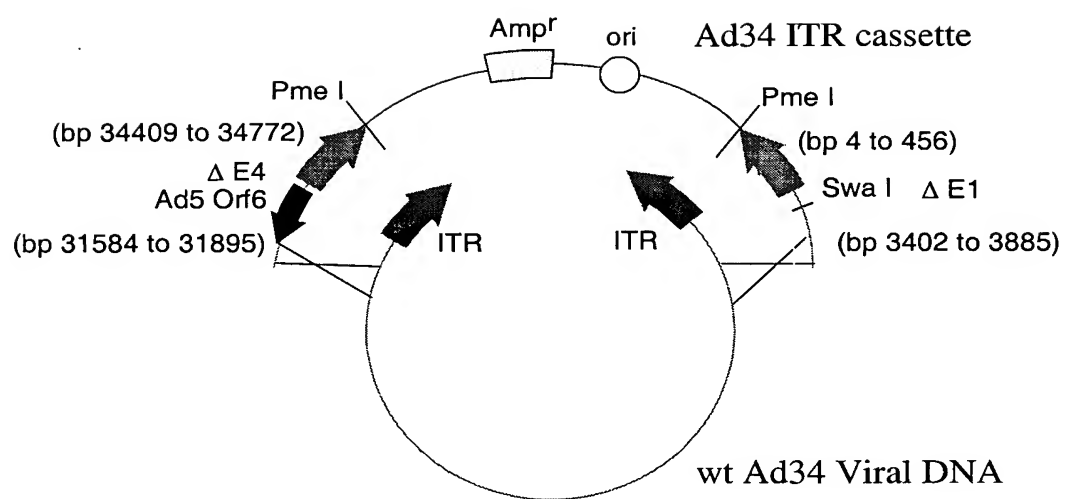


FIG. 2

1	catcatcaat	aatatacctt	atagatggaa	tgggtgccaat	atgtaaatga	ggtgatttta
61	aaaattgtgg	ggtgtgtggt	gattggctgt	gggggttaacg	gctaaacggg	gcggcgcggc
121	cgtgggaaaa	tgacgttttg	tgggggtgga	gttttttttgc	aagttgtcgc	gggaaatgtg
181	acgcataaaa	aggttttttt	tctcacggaa	ctactgactt	ttcccacggg	atthaacagg
241	aaatgaggta	gttttgaccg	gatgcaagt	aaaattgctg	atttgccgcg	gaaaactgaa
301	tgaggaagt	tttttctgaa	taatgtggta	tttatggcag	ggtggagtat	ttgttcaggg
361	ccaggtagac	tttgacccat	tacgtggagg	tttcgattac	cgtgtttttt	acctgaattt
421	ccgcgtaccg	tgtcaaagtc	ttctgttttt	acgtagggtg	cagctgatcg	ctacgggtatt
481	tatacctcag	ggtttgtgtc	aagaggccac	tcttgagtgc	cagcgagaag	agttttctcc
541	tctgcgccgg	cagtttaata	ataaaaaaat	gagagatttg	cgatttctgc	ctcaggaaat
601	aattttctgct	gagactggaa	atgaaatact	ggagcttgtg	gtgcacgccc	tgatgggaga
661	cgatccggag	ccacctgtgc	agctttttga	gacctctacg	cttcagggaac	tgatgtattt
721	agaggtagag	ggatcgggag	attctaata	ggaagctgtg	aatggctttt	ttaccgattc
781	tatgctttta	gctgctaata	aaggattaga	attagatccg	cctttggaca	ctttcgatac
841	tccaggggtg	attgtggaaa	gcggtacagg	tgtaagaaaa	ttacctgatt	tgggttccgt
901	ggactgtgat	ttgcaactgt	atgaagacgg	gtttcctccg	agtgatgagg	aggaccatga
961	aaaggagcag	tctatgcaga	ctgcacgggg	tgagggagtg	aaggctgcca	gtgttggttt
1021	tcagttggat	tgcccggagc	ttcctggaca	tggctgtaag	tcttgtgaat	ttcacaggaa
1081	aaatactgga	gtaaaggaac	tgttatgttc	gctttgttat	atgagagcgc	actgccactt
1141	tattttacagt	aagtgtgttt	aagttaaaaa	ttaaaggaat	atgctgtttt	tcacatgtat
1201	attgagtggg	agttttgtgc	ttcttattat	aggtcctgtg	tctgtgctg	attagtcacc
1261	atctcctgat	tctactacct	cacctcctga	gattcaagca	cctgttctcg	tggacgtgcg
1321	caagcccatt	cctgtgaagc	ttaagcctgg	gaaacgtcca	gcagtggaaa	aacttgaggga
1381	cttgttacag	ggtggggacg	gacctttgga	cttgagtaca	cggaaacggc	caagacaata
1441	agtgttccat	atccgtgttt	acttaagggt	acgtcaatat	ttgtgtgaga	gtgcaatgta
1501	ataaaaaatat	gttaactgtt	cactggtttt	tattgctttt	tggggcggga	ctcaggtata
1561	taagtagaag	cagacctgta	tggttagctc	ataggagctg	gctttcatcc	atggagggtt
1621	gggccatttt	ggaagacctt	agaaagacta	ggcaactgtt	agaggacgct	tcggacggag
1681	tctccggttt	ttggagattc	tggttcgcta	gtgaattagc	tagggtagtt	tttaggataa
1741	aacaggacta	taaagaagaa	tttgaaaagt	tgttggtaga	ttgcccagga	ctttttgaag
1801	ctcttaattt	gggccatcaa	gttcacttta	aagaaaaagt	tttatcagtt	ttagactttt
1861	caaccccagg	tagaactgcc	gctgctgtgg	cttttcttac	ttttatatta	gataaatgga
1921	tcccgcagac	tcatttccagc	aggggatacg	ttttggattt	cgtagccaca	gcattgtgga
1981	gaacatggaa	ggttcgcaag	atgaggacaa	tcttaggtta	ctggccagtg	cagcctttgg
2041	gtgtagcggg	aatcctgagg	catccaccgg	tcatgccagc	ggttctggag	gaggaacagc
2101	aagaggacaa	cccagagacc	ggcctggacc	ctccagtgga	ggaggcggag	tagctgactt
2161	gtctcctgaa	ctgcaacggg	tgcttactgg	atctacgtcc	actggacggg	ataggggctg
2221	taagagggag	agggcatcta	gtggtactga	tgctagatct	gagttggctt	taagttaaat
2281	gagtcgcaga	cgtcctgaaa	ccatttgggt	cgatgaggtc	cagaaagagg	gaggggatga
2341	agtttctgta	ttgcaggaga	aatattcact	ggaacagggt	aaaacatgtt	ggttggagcc
2401	tgaggatgat	tgggaggtgg	ccattaaaaa	ttatgccaa	atagctttga	ggcctgataa
2461	acagtataag	attactagac	ggattaatat	ccggaatgct	tgttacatat	ctggaaatgg
2521	ggctgaggtg	gtaatatagata	ctcaagacaa	ggcagttatt	agatgctgca	tgatgtatat
2581	gtggccttga	gtagtcggta	tgggaagcag	aacttttgta	aatgtttaagt	ttaggggaga
2641	tggttataat	ggaatagtgt	ttatggccaa	taccaaactt	atattgcatg	gtttagcttt
2701	ttttgggttt	aacaatacct	gtgtagatgc	ctggggacag	gttagtgtac	ggggatgtag
2761	tttctatgcg	tgttggattg	ccacagctgg	cagaaccaag	agtcaattgt	ctctgaagaa
2821	atgcataatt	caaagatgta	acctgggcat	tctgaatgaa	ggcgaagcaa	gggtccgcca
2881	ctgcgcttct	acagatactg	gatgttttat	tttaattaag	ggcaatgcca	gcgtaaagca
2941	taacatgatt	tgcggtgctt	ccgatgagag	gccttatcaa	atgctcactt	gtgccgggtg
3001	gcattgtaat	atgctggcta	ctgtgcatat	tgtttcccat	caacgcaaaa	aatggcctgt
3061	ttttgatcac	aatgtgttga	ccaagtgtac	catgcatgca	ggtgggcgta	aggaatgtt
3121	tattgccttac	cagtgttaaca	tgaatcatgt	gaaagtgttg	ttggaaccag	atgccttttc
3181	cagaatgagc	ctaacaggaa	tctttgacat	gaacatgcaa	atctggaaga	tcttgaggta
3241	tgatgatacg	agatcgaggg	tgcgcgcgat	cgaatgcgga	ggcaagcatg	ccaggttcca
3301	gccggtgtgt	gtagatgtga	ctgaagatct	gagaccggat	catttggtta	ttgcccgcac
3361	tggagcagag	ttcggatcca	gtggagaaga	aactgactaa	ggtgagtatt	gggaaaactt
3421	ggggtggggt	tttcagatgg	acagatgtag	taaaaatttg	tttttctgt	ctttcagctg
3481	tcatgagtgg	aaacgcttct	tttaaggggg	gagtccttcag	cccttatctg	acagggcgct
3541	tcccacctctg	ggcaggagtt	cgtcagaatg	ttatgggatc	tactgtggat	ggaagaccg
3601	tccaacccgc	caattcttca	acgtgacctt	atgctacttt	aagttcttca	cctttggacg
3661	cagctgcagc	cgccgcgcgc	gcctctgttg	ccgctaacac	tggtcttggg	atgggttact
3721	atgggaagtat	cgtgggcta	tccacttctt	ctaataaccc	ttctaccctg	actcaggaca
3781	agttacttgt	ccttttggcc	cagctggagg	ctttgaccca	acgtctgggt	gaactttatc
3841	agcaggtggc	cgagttgcga	gtacaaaactg	agtctgctgt	cggcacggca	aagtctaaat

FIG. 3A-1

3901	aaaaaaaaat	tccacaatca	atgaataaat	aaacgagctt	gttggtgatt	taaaatcaag
3961	tgttttttatt	tcattttttc	cgcacgggat	gccctagacc	accgatctcg	atcattgaga
4021	acacgggtgga	ttttttccag	aatcctatag	aggtgggatt	gaatgttttag	atacatgggc
4081	attaggccat	cttttgggtg	gagatagctc	cattgaagg	attcatgctc	cggggtagtg
4141	ttgtaaataca	cccagtcata	acaaggctgc	agtgcattgt	gttgcaaat	atcttttaga
4201	agtaggctga	ttgccacaga	taagcccttg	gtgtagggtg	ttacaaaccg	gttgagctgg
4261	gaggggtgca	ttcgggtgga	aattatgtgc	attttggatt	ggatttttaa	gttggaata
4321	ttgccgccaa	gatctcgtct	tgggttcattg	ttatgaagga	ccaccaagac	ggtgatccg
4381	gtacattttag	gaaattttatc	gtgtagcttg	gatggaaaag	cgtggaaaaa	tttgagaca
4441	cccttgtgtc	ctccgagatt	ttccatgcac	tcattccatga	taatagcaat	ggggccgtgg
4501	gcagcagcgc	gggcaaacac	gttcctgtgg	tctgacacat	catagttatg	ttcctgagtt
4561	aaatcatcat	aagccattttt	aatgaatttg	gggaggagag	tacccgattg	gggtatgaat
4621	gttccttcgg	gccccggagc	atagttcccc	tcacagattt	gcatttccca	agctttcagt
4681	tccgatgggtg	gaatcatgtc	cacctggggg	gctatgaaga	acaccgtttc	tggggcgggg
4741	gtgattagtt	gggatgatag	caagtttctg	agcaattgag	atttgccaca	tccggtgggg
4801	ccataaatga	ttccgatttac	aggttgcagg	tggtagttta	gggaacggca	actgctgtct
4861	tctcgaagca	agggggccac	ctcgttcattc	atttccctta	catgcatatt	ttcccgacc
4921	aaatccatta	ggaggcgcctc	tcctcctagt	gatagaagtt	cttgtagtga	ggaaaagt
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5041	agtctgttcc	acagttcagt	gatgtgttct	atggcatctc	gatccacgag	actcctcgt
5101	ttcgcgggtt	tggacggctc	ctggagttag	gtatgagacg	atgggcgtcc	agcgtgcca
5161	gggttcgggtc	cttccagggt	ctcagtgttc	gagtcagggt	tgtttccgtc	acagtgaagg
5221	ggtgtgcgcc	tgcttggggc	cttgccaggg	tgcgttcag	actcattctg	ctggtggaga
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5341	ttagcgcctc	ggctgcgtgg	ccttggcgcc	ggagcttacc	tttggaagtt	ttcttgata
5401	ccgggcagta	taggcatttc	agcgcataca	gcttggggcg	aaggaaaatg	gattctgggg
5461	agtatgcac	tgcgccgcag	gaggcgcaaa	cagtttcaca	ttccaccagc	caggttaa
5521	ccggttcatt	ggggtcaaaa	acaagtttct	cgccatattt	tttgatgcgt	ttcttacctt
5581	tggcttccat	gagttcgtgt	cctcgttgag	tgacaaacag	gctgtccgta	tccccgtaga
5641	ctgattttac	aggcctcttc	tccagtggag	tgcttcggtc	ttcttcgtac	aggaactctg
5701	accactctga	tacaaaggcg	cgcgtccagg	ccagcacaaa	ggaggctatg	tgggaggggt
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5821	cttcaacatc	caggaatgtg	attggcttct	aggtgtattt	cacgtgacct	ggggtccccg
5881	ctgggggggt	ataaaaagg	gcggttcttt	actgtctctc	actgtctctc	ggatcgctgt
5941	ccagggaacgt	cagctgttgg	ggtaggtatt	ccctctcgaa	ggcgggcatg	acctctgcac
6001	tcagggttgtc	agtttctaa	aacgaggagg	atttgatatt	gacagtgccg	gttgagatgc
6061	ctttcatgag	gttttctgctc	atttggctag	aaaacacaa	ttttttattg	tcaagtttgg
6121	tgccaaatga	tcataacagg	gcgttggtata	aaagtttggc	aatggattcg	atggtttgtg
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6301	ctcgattatg	caaggtaatt	aatccacac	tgggtggccac	ctcgcctcga	aggggttcgt
6361	tggctcaaca	gagcctacct	cctttcctag	aacagaaaag	gggaagtggg	tctagcataa
6421	gttcatcggg	agggctctgca	tccattggtaa	agattcccgg	aagtaaatcc	ttatcaaaat
6481	agctgatggg	agtggggtca	tctaaggcca	tttgccattc	tcgagctgcc	agtgcacgct
6541	catatgggtt	aaggggactg	ccccagggca	tgggatgggt	gagtgcagag	gcatacatgc
6601	cacagatgtc	atagacgtag	atgggatcct	caaagatgcc	tatataggtt	ggatagcatc
6661	gccccctctc	gataactgct	cgcacatagt	catatagtcc	atgtgatggc	gtagcaacc
6721	ccggacccaa	gttgggtgca	ttgggttttt	ctgttctgta	gacaatctgg	cgaagatgg
6781	cgtgagaatt	ggaagagatg	gtgggtcttt	gaaaaatgtt	gaaatgggca	tgaggtagac
6841	ctacagagtc	tctgacaaag	tgggcataag	attcttgaag	cttgggtacc	agttcggcgg
6901	tgacaagtac	gtctagggcg	cagtatgcaa	gtgtttcttg	aatgatgtca	taacctgggt
6961	ggtttttctt	ttcccacagt	tcgcggttga	gaaggatttc	ttcgcgatcc	ttccagtact
7021	cttctagcgg	aaacccgtct	ttgtctgcac	ggtaagatcc	tagcatgtag	aactgattaa
7081	ctgccttgta	agggcagcag	cccttctcta	cgggtagaga	gtatgcttga	gcagcttttc
7141	gcagcgaagc	gtgagtaagg	gcgaagggtg	ctctgaccat	gacttttgaga	aattgggtatt
7201	tgaagtcag	gtcgtcacag	gctccctggt	cccagagtgg	gaagtctacc	cgtttcttgt
7261	agggcgggtt	gggcaaagcg	aaagtaacat	cgttgaagag	aatcttaccg	gctctgggca
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7381	cagctaggac	gatctcgtcg	aaaccgttga	tgttgtgtcc	tacgatgtat	aattctatga
7441	aacgcggcgt	gcctttgacg	tgaggtagct	tattgagctc	atcaaaggtt	aggtctgtag
7501	ggtcagataa	ggcgtagtgt	tcgagagccc	attcgtgcag	gtgaggattt	gcatgtagga
7561	atgatgacca	aagatccacc	gccagtgtcg	tttgtaactg	gtcccatac	tgacgaaaat
7621	gctggccaat	tgccattttt	tctggagtga	cacagtagaa	ggttctgggg	tcttgttgcc
7681	atcgatccca	cttttagttta	atggctagat	cgtgggccat	gttgacgaga	cgctcttctc
7741	ctgagagttt	catgaccagc	atgaaaggaa	ctagttgttt	gccaaggac	cccatccagg

FIG. 3A-2

7801	tgtaagtttc	cacatcgtag	gtcaggaaga	gtctttctgt	gcgaggatga	gagccgatcg
7861	ggaagaactg	gatttcctgc	caccagttgg	aggattggct	gttgattgta	tggaagtaga
7921	agttttctgcg	gcgcgccgag	cattcgtgtt	tgtgcttgta	cagacggccc	cagtagtcgc
7981	agcgttgac	gggttgatc	tctgtaatga	gctgtacctg	gcttcccttg	acgagaaatt
8041	tcagtgaggaa	gccgaggcct	ggcgattgta	tctcgtgctc	ttctatatc	gctgtatcgg
8101	cctgttcac	ttctgtttcg	gtggtggtea	tgctgacgag	cccccgcg	aggcaagtcc
8161	agacctcggc	gcgggagggg	cggagctgaa	ggaccagagc	gcgcaggctg	gagctgtcca
8221	gagtcctgag	acgctgcgga	ctcagggttag	taggtagggg	cagaagatta	acttgcata
8281	tcttttccag	ggcgtgcggg	aggttcagat	ggtacttgat	ttccacaggt	tcgtttgtag
8341	agatgtcaat	ggcttgacgg	gttccgtgtc	ctttgggccc	cactaccgta	cctttgtttt
8401	ttcttttgat	cggtggtggc	tctcttgctt	cttgcatgct	cagaagcgat	gacggggacg
8461	cgccgcgggc	ggaagcgggt	gttccggacc	cggaggcatg	gctggtagtg	gcacgtcggc
8521	gccgcgcacg	ggcaggttct	ggtactgcgc	tctgagaaga	cttgctgctg	ccaccacgcg
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8701	ttcttgtagc	tcaccagagt	tgctcgggta	ggcgatctcc	gccatgaact	gctcgatttc
8761	ttctctctga	agatctccgc	gacctcctct	ctcgacgggtg	gccgcgaggt	cattggagat
8821	acggcccatg	agttgggaga	atgcagtcac	gcccgcctcg	ttccagacgc	ggctgtaaac
8881	cacggccccc	tcggagtctc	ttgcgcgcat	caccacctga	gcgagggtaa	gctccacgtg
8941	tctggtgaag	accgcatagt	tgcatagggc	tcgaaaaagg	tagttgagtg	tggtggcaat
9001	gtgttcggcg	acgaagaaat	acatgatcca	tctctcagc	ggcatttcgc	tgacatcgcc
9061	cagagcttcc	aagcgtccca	tggcctcgta	gaagtccacg	gcaaaattaa	aaaactggga
9121	gtttcgcgcg	gacacgggtca	attcctcctc	gagaagacgg	atgagttcgg	ctatggtggc
9181	ccgtacttcg	cgttcgaagg	ctcccgggat	ctcttcttcc	tcttctatct	cttcttccac
9241	taacatctct	tcttcgtctt	caggcggggg	cggagggggc	acacggcgac	gtcgcggcg
9301	cacgggcaaa	cggtcgatga	atcgttcaat	gacctctccg	cggcgccggc	gcatggtttc
9361	agtgcaggcg	cggccgttct	cgcgcggtcg	cagagtaaaa	acaccgccgc	gcatctcctt
9421	aaagtgggtga	ctgggagggt	ctccgtttgg	gagggagagg	gcgctgatta	tacattttat
9481	taattggccc	gtagggactg	cgcgcagaga	tctgatcggtg	tcaagatcca	cgggactgga
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9721	ggcaggaggc	accagggtct	tgggtccggc	ttgctggata	cgcaggcgat	tggccattcc
9781	ccaagcatta	tcctgacatc	tagcaagatc	tttgtagtag	tcttgcatga	gctgttctac
9841	gggcacttct	tcctcaccgc	ttctgccatg	catacgtgtg	agtccaaacc	cgcgcatagg
9901	ttgtaccagt	gccaagtcag	ctacgactct	ttcggcgagg	atggcttgct	gtacttgggt
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10021	gtgaagcacg	ttggccatga	ctgaccagtt	aactgtctgg	tgaccagggc	gcacgagctc
10081	ggtgtattta	aggcgcgaat	aggcgcgggt	gtcaaagatg	taatcggttg	aggtgcgcac
10141	cagatactgg	taacctataa	gaaaatgcgg	cgggtggttg	cggtagagag	gccatcggtc
10201	tgtagctgga	gcgcgggggg	cgaggtcttc	caacataagg	cgggtgatagc	cgtagatgta
10261	cctggacatc	caggtgatcc	ctcggcggtg	agtagaagcc	caggagaaact	cgcctacgcg
10321	tttccaaatg	ttgcgtagcg	gcataagata	gttcattgta	ggcagggttt	gacagtga
10381	gcgcgcgcag	tcattgatgc	tctatagaca	cggagaaaaa	gaaagcgttc	agcgactcga
10441	ctccgtagcc	tggaggaacg	tgaacgggtt	gggtcgcggg	gtacccccgt	tcgagacttg
10501	tactcgagcc	ggccggagcc	gcggctaacc	tggtattggc	actcccgtct	cgaccagcc
10561	tacaaaaatc	caggatacgg	aatcgagtcg	ttttgctggt	tgccgaatgg	cagggaaagt
10621	agtcctatct	tttttttttg	ccgtccagat	gcatcccgtg	ctgcgacaga	tgcttcccca
10681	acaacagccc	ccctcgcagc	agcagcaacc	acaaaaggct	gtccctgcaa	ctactgcaac
10741	tgccgctgtg	agcgggtgcg	gacagcccgc	ctatgatctg	gacttggaag	agggcggaag
10801	actggcacgt	ctaggtgcgc	cttcgcccga	gcggcatccg	cgagttcaac	tgaaaaaaga
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10921	ggaggagatg	cgagcttccc	gctttaacgc	gggtcgtgag	ctgcgtcacg	gtttggacag
10981	aagacgagtg	ttgcgggacg	aggatttcga	agttgatgaa	gtgacaggga	tcagtcctgc
11041	cagggcacac	gtggctgcag	ccaaccttgt	atcggcttac	gaacagacag	taaaggaaga
11101	gcgtaatttc	caaaagtctt	ttaataatca	tgtgcgaacc	ctcattgccc	gcgaagaagt
11161	cacccttggt	ttgatgcatt	tgtgggattt	gatggaaagt	atcattcagat	accctactag
11221	caaacctctg	accgcacagc	tgtttctggt	ggtgcaaac	agcagagaca	atgaggcttt
11281	cagagaggcg	ctgctcaaca	tcaccgaacc	cgaggggaga	tggttgtag	atcttatcaa
11341	cattctacag	agtatcatag	tgcaggagcg	gagcctgggc	ctggccgaga	aggtggctgc
11401	catcaattac	tcggttttga	gcttgggaaa	gtattacgct	cgcaagatct	acaagactcc
11461	atacgttccc	atagacaagg	aggtgaagat	agatgggttc	tacatgcgca	tgacgtgaa
11521	ggtgttgacc	ctgagcgatg	atcttggggg	gtaccgcaat	gacagaatgc	atcgcgcggt
11581	gagcgccagc	aggaggcgcg	agtttaagcga	cagggaaact	atgcacagtt	tgcaagagc
11641	tctaactgga	gctggaaccg	agggtgagaa	ttactttgat	atgggagctg	acttgcagtg

FIG. 3A-3

11701	gcagcctagt	cgcaggggctc	tgaacgcgcg	gacggcagga	tgtgagcttc	cttacataga
11761	agaggcggat	gaaggcggag	aggaagaggg	cgagtacttg	gaagactgat	ggcacaaccc
11821	gtgttttttg	ctagatggaa	cagcaagcac	cggatcccg	aatgcggcg	gcgctgcaga
11881	gccagccgtc	cggcattaac	tcctcggacg	attggaccca	ggccatgcaa	cgtatcatgg
11941	cgttgacgac	tcgcaacccc	gaagccttta	gacagcaacc	ccaggccaac	cgtctatcgg
12001	ccatcatgga	agctgtagtg	ccttcccgt	ctaattccac	tcatgagaag	gtcctggcca
12061	tcgtgaacgc	gttggtggag	aacaaagcta	ttcgtccaga	tgaggccgga	ctggatataca
12121	acgtctctct	agaacgcgtg	gctcgtaca	acagtagcaa	tgtgcaaacc	aatttggacc
12181	gtatgataac	agatgtacgc	gaagccgtgt	ctcagcgcga	aaggttccag	cgcgatgcca
12241	acctgggttc	gctgggtggc	ttaaattgct	tcttgagtac	tcagcctgct	aatgtgccgc
12301	gtgggtcaaca	ggattatact	aactttttaa	gtgctttgag	actgatggta	tcagaagtac
12361	ctcagagcga	agtatatcag	tccggctctg	attacttctt	tcagactagc	agacagggt
12421	tgcagacggg	aaatctgagc	caagctttta	aaaaccttaa	aggtttgtgg	ggagtgcattg
12481	ccccggtagg	agaaagagca	accgtgtcta	gcttggtaac	tccgaactcc	cgcctattat
12541	tactgttggt	agctcctttc	accagacgag	gtagcatcga	ccgtaattcc	tatttggggt
12601	acctactaaa	cctgtatcgc	gaagccatag	ggcaaaagtca	ggtggacgag	cagactatc
12661	aagaaattac	ccaagtcagt	cgcgcttttg	gacaggaaga	cactggcagt	ttggaagcca
12721	ctctgaactt	cttgcttacc	aatcgggtct	aaaagatccc	tcctcaatat	gctcttactg
12781	cggaggagga	gaggatcctt	agatatgtgc	agcagagcgt	gggattgttt	cttagtgaag
12841	agggggcaac	tccgactgca	gcactggaca	tgacagcgcg	aaatatggag	ccagactgt
12901	atgccagtaa	ccgacctttc	attaacaaac	tgctggacta	cttgacacaga	gctgccgcta
12961	tgaactctga	ttatttccacc	aatgccatct	taaacccgca	ctggctgccc	ccacctgggt
13021	tctacacggg	cgaatatgac	atgcccgcac	ctaattgacgg	atttctgtgg	gacgacgtgg
13081	acagcgatgt	tttttcacct	ctttctgac	atcgcacgtg	gaaaaaggaa	ggcggcgata
13141	gaatgcattc	ttctgcatcg	ctgtccgggg	tcattgggtg	taccgcggct	tagccccgag
13201	ctgcaagtcc	ttttcctagt	ctacctttt	ctctacacag	tgtacgtagc	agcgaagtgg
13261	gtagaataag	tcgcccaggt	ttaatgggcg	aagaggagta	cctaaacgat	tccttgctca
13321	gaccggcaag	agaaaaaat	ttcccaaaca	atggaataga	aagtttggtg	gataaaatga
13381	gtagatggaa	gacttatgct	caggatcaca	gagacgagcc	tgggatcatg	ggactacaa
13441	gtagagcgag	ccgtagacgc	cagcgccatg	acagacagag	gggtcttgtg	tgggacgatg
13501	aggattcggc	cgatgatagc	agcgtatttg	acttgggtgg	gagaggaagg	ggcaacccgt
13561	ttgctcattt	gcgcccctgc	ttgggtggta	tgttgtaaaa	aaaaataaaa	aagaaaaaac
13621	tcaccaaggg	catggcgacg	agcgtacggt	cgttcttctt	tattatctct	gtctagtata
13681	atgaggcgag	tcgtgctagg	cggagcgggtg	gtgtatccgg	agggctctcc	tccttcgtac
13741	gagagcgtag	tgacgacgca	gcaggcgacg	gcggtgatgc	aatccccact	ggaggctccc
13801	tttgtgcctc	cgcgatacct	ggcacctacg	gagggcgaga	acagcattcg	ttactcggaa
13861	ctggcacctc	agtacgatac	caccaggttg	tatctgggtg	acaacaagtc	ggcggacatt
13921	gcttctctga	actatcagaa	tgaccacagc	aacttcttga	ccacggtggt	ccaaaacaat
13981	gactttaccc	ctacggaagc	cagcaccacg	accattaact	ttgatgaacg	atcgcggtgg
14041	ggcggtcagc	taaaaacat	catgcatact	aacatgcccc	acgtgaacga	gtatatgttt
14101	agtaaacagt	tcaaagcgcg	tgtgatgggt	tccagaaaaa	ctcctgaggg	tgttagagta
14161	gacgataatt	atgatcataa	gcaagatat	ctaaaatacg	agtggttcga	gtttactttg
14221	ccagaaggca	acttttcggt	cactatgact	atcgacttga	tgaacaatgc	catcatagac
14281	aattacttga	aagtgggcag	acagaatgga	gtgttggaag	gtgacattgg	tgttaagttc
14341	gacactagga	acttcaagtt	gggatgggat	ccagaaacta	agttgatcat	gcctgggggt
14401	tacacctatg	aggccttcca	tcctgcacat	gtattgctgc	ctggctgcgg	agtggacttt
14461	accgaaagcc	gtctgagcaa	ccttcttggc	attagaaaga	aacacccatt	ccaagagggt
14521	tttaagatct	tgtatgagga	tttagaagga	ggaaatatct	cagccctttt	ggatgtagat
14581	gcttatgaga	acagcaagaa	agatcaaaaa	gcaaaaatag	aagctgctgc	agaagctaaa
14641	gcaaacatag	ttgccaacga	tccggtaagg	gtggctaacg	ctagtgaat	caggggagac
14701	agttttgccg	caacatccgt	tccgactaaa	gaatcattat	tggatgatgt	gtctcaaaac
14761	atagagttaa	aactcactat	taagcctgtg	gaaaaagatg	gcaaaaaacg	aagttacaat
14821	gtgttggaag	ataaaatcaa	cacggcctat	cgcagttggt	acctttcgta	caattatggc
14881	gaccccgaaa	aaggagtgcg	ttcctggaca	ttgctcacca	cctcagatgt	cacctgcgga
14941	gcggagcagg	tctactggtc	gtctccagac	attgatgcagg	atcctgtcac	tttccgctcc
15001	actagacaag	tcagtaacta	ccctgtgggtg	ggtgcagagc	ttatgcccgt	ctttccaaag
15061	agcttctaca	acgaacaagc	tgtgtactcc	cagcagctcc	gccagtccac	ctcgtttacg
15121	cacgtcttca	accgctttcc	tgagaaccag	attttaatcc	gtccgcgggc	gcccacaatt
15181	accacgcgtc	gtgaaaacgt	tcctgtctct	acagatcacg	ggaccctgac	gttgccgcagc
15241	agtatccggg	gagtccaacg	tgtgaccgtt	actgacgcca	gacgcgcac	ctgtccctac
15301	gtgtacaagg	cactgggcat	agtcgcaccg	cgcgtccttt	caagccgcac	tttctaaaaa
15361	aaaaaaaaaa	atgtccggtt	ttatctcgcc	cagtaataac	accggttggg	gtctgcgcgc
15421	tcccagcaag	atgtacggag	gcgcacgcaa	acgttctacc	caacatcccg	tgcgtgttcg
15481	cgggcatttt	cgcgtccatt	gggtgcccct	caagggccgc	actcgcgttc	gaaccacgct
15541	cgatgatgta	atcgatcagg	tggttgccga	cgcccgtaat	tatactcta	ctgcgcctac

FIG. 3A-4

15601	atctactgtg	gacgcagtta	ttgacagtgt	agtggctgac	gctcgcaact	atgctcgacg
15661	taagagccgg	cgaaggcgca	ttgccagacg	tcaccgagct	accactgccca	tgcgagcagc
15721	aagagctctg	ctacgaagag	ctagacgcgt	ggggcggaaga	gccatgctta	ggggcgccag
15781	acgtgcagct	tcggggcgcca	gcgcgcggcag	gtcccgcagg	caagcagccg	ctgtcgcagc
15841	ggcgactatt	gccgacatgg	cccaatcgcg	aagaggcaat	gtatactggg	tgcgtagcgc
15901	tgccaccggg	caacgtgtac	ccgtgcgcac	ccgtccccct	cgcaactaga	agatactgag
15961	cagtctccga	tggtgtgtcc	cagcggcgag	gatgtccaag	cgcaaataca	aggaagaaat
16021	gctgcagggt	atcgcacctg	aagtctacgg	ccaaccgttg	aaggatgaaa	aaaaaccccg
16081	caaaatcaag	cgggtaaaaa	aggacaaaaa	agaagaggaa	gatggcgatg	atgggctggc
16141	ggagtttgtg	cgcgagtttg	ccccacggcg	acgcgtgcaa	tggcgtgggc	gcaaagtctg
16201	acatgtgttg	agacctggaa	cttcgggtgg	ctttacaccc	ggcgagcggt	caagcgctac
16261	ttttaagcgt	tcctatgatg	aggtgtacgg	ggatgatgat	attcttgagc	aggcagctga
16321	ccgattaggg	gagtttgctt	atggcaagcg	tagtagaata	aatcccaagg	atgaaacagt
16381	gtccataccc	ttggatcatg	gaaatcccac	ccctagtctt	aaaccgggtca	ctttgcagca
16441	agtgttacc	gtaactccgc	gaacaggtgt	taaacgcgaa	ggtgaagatt	tgtatcccac
16501	tatgcaactg	atgggtgccc	aacgcgagaa	gttggaggac	gttttggaga	aagtataaagt
16561	ggatccagat	attcaacctg	aggttaaagt	gagacccatt	aagcaggtag	cgcttggtct
16621	gggagtacaa	actgtagaca	ttaaaattcc	cactgaaagt	atggaagtgc	aaactgaacc
16681	cgcaaagcct	actgccacct	ccactgaagt	gcaaaccggac	ccatggatgc	ccatgcctat
16741	tacaactgac	gccgtcggtc	ctttgcagac	atcccgcgca	aagtaacgtc	cagcaagtct
16801	gttgatgccc	aactatgtcg	tacacccatc	tattattcct	actcctggtt	accgaggcac
16861	tcgctactat	cgagccgcaa	acagtacttc	ccgcgcgtcg	cgcaagacac	ctgcaaatcg
16921	cagtcgtcgc	cgtagacgca	caagcaaac	gattcccggc	gccctggtgc	ggcaagtgtg
16981	ccgcaatggg	agtgcggaac	atgtgcagac	gccgcgtgcg	cgttaccatc	ctagatcatc
17041	cacttaataca	atgttgccgc	tgccctcctt	cagatatggc	cctcacttgt	cgcttcgcg
17101	ttcccatacac	tggttaccga	ggaagaaact	cgcgccgtag	aagaggggat	ttggggcgcg
17161	gaatgcgacg	ctacaggcga	cggcgtgcta	tccgcgaagca	attgcggggg	ggttttttgc
17221	cagccttaat	tcgaattatc	gctgtgcgca	ttggcgcaat	accaggcata	gcttcctgtg
17281	cggttcaggc	ctcgcaacga	cattgacatt	ggaaaaaaa	aaaacgtata	aataaaaaat
17341	acaatggact	ctgacactcc	tggtactgtg	actatgtttt	cttagagatg	gaagacatca
17401	atttttcatc	cttgggtccg	cgacacggca	cgaagccgta	catgggcacc	tggagcgaca
17461	tcggcacgag	ccaactgaac	ggggggcgct	tcaattggag	cagtatctgg	agcgggctta
17521	aaaatttttg	ctcaaccata	aaaacatacg	ggaaacaaagc	tggaacagc	agtacaggac
17581	aggcgcttag	aaataaactt	aaagaccaga	acttccaaca	aaaagtagtc	gatgggatag
17641	cttccggtat	caatggagtg	gtagatttgg	ctaaccaggc	tgtgcagaaa	aagataaaca
17701	gtcggttgga	cccgcgcgca	gcaaccccg	gtgaaatgca	agtggaggaa	gaaattcctc
17761	cgccagaaaa	acgaggcgac	aagcgtccgc	gtcccgaatt	ggaagagacg	ctggtagcgc
17821	gcgtagatga	accgccttct	tatgaggaag	caacgaagct	tggaatgccc	accactagac
17881	cgatagcccc	tatggccacc	ggggtgatga	aaccttctca	gttgcatcga	cccgtcacct
17941	tggatttgcc	ccctcctcct	gctgctactg	ctgtaccgcg	ttctaagcct	gtcgctgccc
18001	ggcaaccagt	cgccgtagcc	aggtcacgtc	ccggggggcg	tcctcgctca	aatgcacact
18061	ggcaaaatc	tctgaacagc	atcgtgggtc	taggcgtgca	aagtgtaaaa	cgccgtcgct
18121	gcttttaatt	aaatatggag	tagcgcttaa	cttgccctatc	tgtgtatatg	tgtcattaca
18181	cgccgtcaca	gcatcagagg	aaaaaaggaa	gaggtcgtgc	gtcgacgctg	agttactttc
18241	aagatggcca	ccccatcgat	gctgccccaa	tgggcataca	tgcacatcgc	cggacaggat
18301	gcttcggagt	acctgagtc	ggctctggtg	cagttcgccc	gcgccacaga	cacctacttc
18361	aatctgggaa	ataagtttag	aaatcctacc	gtagcgccga	cccacgatgt	gaccaccgat
18421	cgtagccagc	ggctcatggt	gcgcttcgtg	cccgttgacc	gggaggacaa	tacatactct
18481	tacaaagtgc	ggtacaccct	ggccgtgggc	gacaacagag	tgctggatat	ggccagcacg
18541	ttctttgaca	ttaggggcgt	gttgacaga	gggtcccagt	ttaaacccta	ttctggtagc
18601	gcttacaact	ccctggctcc	taaaggcgct	ccaaatgcat	ctcagtgggt	ggataaggga
18661	gttacaagca	ctggcctagt	ggacgacggc	aatactgatg	atggggaaga	agccaaaaaa
18721	gcaacataca	cttttggttaa	tgctccagta	aaagccgagg	ctgaaatcac	aaaagacgga
18781	ttgcccgttg	gcttggaagt	ttcaactgaa	ggctcctaacc	caatctatgc	tgataagctt
18841	tatcagccag	aacctcaagt	gggagacgaa	acttggaactg	acctagacgg	aaaaaccgaa
18901	gagtatggag	ggagggttct	taaacctgaa	actaaaatga	aaccttgcta	cggatctttt
18961	gctaaacct	ctaataattaa	aggaggtcag	gcaaaggtaa	aacccaaaga	agacgatggc
19021	actaacaaca	tcgagtatga	cattgacatg	aacttctttg	acttaagatc	acaaagatca
19081	gaactcaaac	ctaaaattgt	aatgtatgca	gaaaatgtgg	acctggaatg	tccagatact
19141	catgttgtgt	acaaacctgg	agtttcagat	gctagtctctg	agaccaatct	tggacaacag
19201	tctatgccc	acagacccaa	ctacattggc	ttcagagata	acttcatcgg	acttatgtac
19261	tataacagta	ctggcaacat	gggggtactg	gctggccaag	cgctcagtt	gaatgcagtg
19321	gttgacttgc	aggacagaaa	cacagaactg	tcttaccac	tcttgcttga	ctctctgggc
19381	gacagaacca	gatacttttag	catgtggaat	caggctgtgg	acagttatga	tctgtgtgta
19441	cgtgttattg	aaaatcatgg	tgtggaagat	gaacttccca	actattgttt	tccgttggat

FIG. 3A-5

19501	ggtgtcggtc	cgcgaaacaga	tagttacaag	gagattaagc	caaattggaga	ccaatctact
19561	tggacaaatg	tagaccaaac	tggcagcagt	gaacttgcta	agggaaatcc	atttgccatg
19621	gaaattaaacc	ttcaagccaa	tctatggcga	agtttccttt	attccaatgt	ggctctatat
19681	ctcccagact	cgtacaaata	caccccgctc	aatgtcactc	ttccagaaaa	caaaaacacc
19741	tacgactaca	tgaacgggcg	ggtggtgccc	ccatctctag	tagacaccta	tgtgaacatt
19801	ggtgccaggt	ggtctctgga	tgccatggac	aatgtcaacc	cattcaacca	ccaccgtaac
19861	gctggcttgc	gttaccgatc	catgcttctg	ggtaacggac	gttatgtgcc	tttccacata
19921	caagtgcctc	aaaaattctt	cgctgttaaa	aacctgctgc	ttctcccagg	ctcctacact
19981	tatgagtggg	actttaggaa	ggatgtaaac	atggttctac	agagtccctt	cggtaacgac
20041	ctacgggtag	atggcgccag	catcagtttt	acgagcatca	acctctatgc	tacttttttc
20101	cccatggctc	acaacaccgc	ttccaccctt	gaagccatgc	tgcggaatgc	caccaatgat
20161	cagtcattca	acgactacct	atctgcagct	aacatgctct	accccaattc	tgccaatgca
20221	accaatatct	ccatttccat	tccttctcgc	aactgggagg	ctttcagagg	ctgggtcattt
20281	accagactga	aaaccaaaaga	aactccctct	ttgggggtctg	gatttgaccc	ctacttcgct
20341	tattctgggt	ctattcccta	cctggatggg	accttctacc	tgaaccacac	ttttaagaag
20401	gtttccatca	tgtttgactc	ttcagtgagg	ttggcctggaa	atgacaggtt	actatctcct
20461	aacgaatttg	aaataaaagcg	cactgtggat	ggcgaaggct	acaacgtagc	ccaatgcaac
20521	atgaccaaag	actggttctt	ggtacagatg	ctcgccaact	acaacatcgg	ctatcagggc
20581	ttctacatct	cagaaggata	caaagatcgc	atgtattcat	ttttcagaaa	cttccagccc
20641	atgacgaggc	aggtggttga	tgagggtcaat	tacaaagact	tcaaggccct	cgccaatccc
20701	taccaacaca	acaactctgg	ctttgtgggt	tacatggctc	cgaccatcgc	tcaaggtcaa
20761	ccctatcccg	ctaactatcc	ctatccactc	attggaacaa	ctgccgtaaa	tagtggttacg
20821	cagaaaaagt	tcttgtgtga	cagaaccatg	ttggcgcatc	cgttctcaag	caacttcatg
20881	tctatgggag	cccttacaga	cttgggacag	aacatgctct	atgccaaact	agctcatgct
20941	ctggacatga	cccttgaggt	ggatcccatg	gatgagccca	ccctgcttta	cttctctctc
21001	gaagttttctg	acgtgggtcag	agtgcacatc	ccacaccgcg	gcacatcga	ggcagttctac
21061	ctgcgtacac	cgttctcggc	cggtaacgct	accacgtaag	aagcttcttg	cttcttgcaa
21121	acagcagctg	caaccatggc	ctgcccagtc	caaaacggct	ccagcgagca	agagctcaga
21181	gccattgtcc	aagacctggg	ttgcggacca	tatttttttg	gaaccttgga	taagcgtctc
21241	ccgggggttca	tggtcccccga	taagctcgcc	tgtgccattg	taaatacggc	cggacgtgag
21301	acgggggggag	agcactgggt	ggctttcggg	tggaacccac	gttctaacac	ctgctacctt
21361	tttgatcctt	ttggattctc	ggatgatcgt	ctcaaacaga	tttaccagtt	tgaatatgag
21421	ggtctcctgc	gccgcagcgc	tcttctacc	aaggaccggg	gtattacgct	ggaaaaatct
21481	accagaccgc	tgcagggccc	ccgttctgcc	gcctgcggac	ttttctgctg	catgttcctt
21541	catgcctttg	tgcactggcc	tgaccgtccc	atggacggaa	acccaccat	gaaattgcta
21601	actggagtg	caaacaacat	gcttcattct	cctaaagtcc	agccaccctt	gtgtgacaat
21661	caaaaagcac	tctaccattt	tctcaatacc	cattcgccct	attttcgctc	tcactgtaca
21721	cacatcgaaa	gggccactgc	gttcgaccgt	atggatgtgc	aataatgatt	catgtaaaca
21781	acgtgttcaa	taaacagcac	tttatttttt	acatgtatcg	aggctctgga	ttacttattt
21841	atttacaagt	cgaatgggtt	ctgacgagaa	tcagaatgac	ccgcaggcag	tgatacgttg
21901	cggaactgat	acttgggttg	ccacttgaat	tcgggaatca	ccaacttggg	aaccggtata
21961	tcgggcagga	tgctactcca	cagcttctctg	gtcagctgca	aagctcccag	caggtcagga
22021	gccgaaatct	tgaaatcaca	attaggacca	gtgctctgag	cgcgagagtt	gcgggtacacc
22081	ggattgcagc	actgaaacac	catcagcgac	ggatgtctta	cgcttgccag	cacggtggga
22141	tctgcaatca	tgcccacatc	cagatcttca	gcattggcaa	tgctgaacgg	ggctcatctt
22201	caggtctgcc	taccatggc	ggcaccctaa	ttaggcttgt	ggtttaacgc	gcagtgcagg
22261	gggatcagta	tcattcttggc	ctgatcctgt	ctgattcctg	gatacacggc	tctcatgaaa
22321	gcacatatt	gcttgaaagc	ctgctgggct	ttactaccct	cggtataaaa	catcccgcag
22381	gacctgctcg	aaaactgggt	agctgcgcag	ccggcatcat	tcacacagca	gcgggctgca
22441	ttgttggcta	tttgcaccac	acttctgccc	cagcggtttt	gggtgatttt	ggttcgctcg
22501	ggattctcct	tcaaggctcg	ttgtccgttc	tcgtgggcca	catccatctc	gataatctgc
22561	tccttctgaa	tcataatatt	gccatgcaag	cacttcagct	tgccctcata	atcattgcag
22621	ccatgaggcc	acaacgcaca	gcctgtacat	tccaatttat	gggtggcgat	ctgagaaaaa
22681	gaatgtatca	ttccctgcag	aaatcttccc	atcatcgtgc	tcagtgtctt	gtgactagt
22741	aaagttaact	ggatgcctcg	gtgctcctcg	ttcacgtact	gggtgacagt	gcgcttgtaa
22801	tgctcgtgct	gctcaggcat	tagtttaaaa	gaggttctaa	gttcgttatc	cagcctgtac
22861	ttctccatca	gcagacacat	cacttccatg	cctttctccc	aagcagacac	caggggcaag
22921	ctaactcgat	tcttaacagt	gcaggcagca	gctcctttag	ccagagggtc	atctttggcg
22981	atcttctcaa	tgcttctttt	gccatctctc	tcaacgatgc	gcacggcgcg	gatgctgaaa
23041	cccatgcta	caagttgcgc	ctcttctctt	tcttcttcgc	tgtcttgact	gatgtcttgc
23101	atggggacat	gtttgggtctt	ccttggcttc	tttttcgggg	gtatcggagg	aggaggactg
23161	tcgctccgtt	ccggagacag	ggaggattgc	gacgtttcgc	tcaccattac	caactgactg
23221	ctggtagaag	aacctgaccc	cacacggcga	caggtgtttc	tcttcggggg	caaggttgga
23281	ggcgatttgcg	aagggttgcg	gtccgacctg	gaaggcggat	gactggcaga	acccctcccg
23341	cgttcggggg	tgtgctccct	gtggcggtcg	cttaactgat	ttccttcgcg	gctggccatt

FIG. 3A-6

23401	gtgtttctcct	aggcagagaa	acaacagaca	tggaaactca	gccattgctg	tcaacatcgc
23461	cacgagtgcc	atcacatctc	gtcctcagcg	acgaggaaaa	ggagcagagc	taaagcattc
23521	caccgcccag	tcttgccacc	acctctaccc	tagaagataa	ggaggtcgac	gcattctcatg
23581	acatgcagaa	taaaaaagcg	aaagagtctg	agccagacat	cgaacaagac	ccgggctatg
23641	tgacaccggt	ggaacacgag	gaagagttga	aacgctttct	agagagagag	gatgaaaact
23701	gccccaaaaca	gcaagcggat	aactatcacc	aagatgctgg	aaatagggat	cagaacaccg
23761	actacctcat	agggcttgac	ggggaagacg	cgctccttaa	acatctagca	agacagtcac
23821	tcatagtcaa	ggatgcatta	ttggacagaa	ctgaagtgcc	catcagtgtc	gaagagctca
23881	gccgcgccta	cgagcttaac	ctattttcac	ctcgtactcc	ccccaaacgt	cagccaaacg
23941	gcacctgcga	gccaaatcct	cgcttaaact	tttatccagc	ttttgctgtg	ccagaagtac
24001	tggtaccta	tcacatcttt	tttaaaaatc	aaaaaattcc	agtctcctgc	cgcgctaact
24061	gcacccgcgc	cgatgcccta	ctcaatctgg	gacctgggtc	acgcttacct	gatatagctt
24121	ccttggaaga	ggttccaaag	atcttcgagg	gtctgggcaa	taatgagact	cgggcccga
24181	atgctctgca	aaagggagaa	aatggcatgg	atgagcatca	cagcgttctg	gtggaattgg
24241	aaggcagata	tgccagactc	gtatggcagc	agcgaagcgt	cgaggtcaca	cactttgcac
24301	accccgctgt	caacctgccc	cctaaagtca	tgacggccgt	catggaccag	ttactcatta
24361	agcgcgcaag	tcccttttca	gaagacatgc	atgaccacga	tgctgtgat	gagggtaaac
24421	cagtggtcag	tgatgagcag	ctaaccgat	ggctgggcac	cgactctccc	cgggatttgg
24481	aagagcctcg	caagcttatg	atggcctggg	tgctgggtac	cgtagaacta	gagtgtcttc
24541	ggcgtttctt	taccgattca	gaaaccttgc	gcaaactcga	agagaactctg	cactacactt
24601	ttagacacgg	ctttgtgcgg	caggcatgca	agatatctaa	cgtggaaactc	accaacctgg
24661	tttctacat	gggtattctg	catgagaatc	gcctaggaca	aagcgtgctg	cacagcacc
24721	taaaggggga	agcccgcctg	gattacatcc	gcgatttgtg	ttatctctac	ctgtgccaca
24781	cgtaggcaaac	cggcatgggt	gtatggcagc	aatgtttaga	agaacagaa	ctgaaagagc
24841	taaacaagct	cttacagaaa	tctcttaagg	ttctgtggac	aggggttcgac	agcgcaccg
24901	tcgcttccga	cctggcagac	ctcatcttcc	cagagcgtct	cagggttact	ttgcgaaacg
24961	gactgcctga	ctttatgagc	cagagcatgc	ttaacaattt	tcgctctttc	atcctggaac
25021	gctccggtat	cctgcccgc	acctgctgcg	cactgcccctc	cgactttgtg	cctctcacct
25081	accgcgaatg	cccccgccg	ctatggagtc	actgctacct	gttccgtctg	gccaactacc
25141	tctcctacca	ctcggatgtg	atcgaggatg	tgagcggaga	cggcttgctg	gagtgtcact
25201	gccgctgcaa	tctgtgcacg	ccccaccggt	ccctagcttg	caacccccag	ttgatgagcg
25261	aaaccagat	aataggcacc	tttgaattgc	aaggccccag	cagccaaggc	gatgggtctt
25321	ctcctgggca	aagtttaaaa	ctgaccccg	gactgtggac	ctccgcctac	ttgcgcaagt
25381	ttgccccgga	agattaccac	ccctatgaaa	tcaagttcta	tgaggacca	tcacagctc
25441	cgaaagccga	actttcggcc	tgcgtcatca	cccagggggc	aattctggcc	caattgcaag
25501	ccatccaaaa	atcccgcgca	gaatttctac	tgaaaaaggg	taaggggggc	taccttgacc
25561	cccagaccgg	cgaggaaactc	aacacaaggt	tccctcagga	tgtcccaacg	acgagaaaagc
25621	agaagttga	aggtgcagcc	gccgccccca	gaagatatgg	aggaagattg	ggacagtcag
25681	gcagaggaag	cggaggagga	ggacagtctg	gaggacagtc	tggaggaaga	cagtttggag
25741	gaggaaaacg	aggaggcaga	ggaggtggaa	gaagtaaccg	ccgacaaaca	gttatcctcg
25801	gctgcggaga	caagcaacag	cgctaccatc	tccgctccga	gtcaggaac	ccggcggcgt
25861	cccagcagta	gatgggacga	gaccggacgc	ttcccgaacc	caaccagcgc	ttccaagacc
25921	ggtaagaagg	atcggcaggg	atacaagtcc	tggcgggggc	ataagaatgc	catcatctcc
25981	tgcttgcatg	agtgcggggg	caacatatcc	ttcacgcggc	gctacttgct	attccaccat
26041	ggggtgaact	ttccgcgcaa	tgttttgcat	tactaccgtc	acctccacag	cccctactat
26101	agccagcaaa	tcccggcagt	ctcgacagat	aaagacagcg	gcggcgacct	ccaacagaaa
26161	accagcagcg	gcagttagaa	aatacacaa	aagtgcagca	acaggaggat	taaagattac
26221	agccaacgag	ccagcgcaaa	cccagagagt	aagaaatcgg	atcttttcaa	ccctgtatgc
26281	catcttccag	cagagtcggg	gccaagagca	ggaactgaaa	ataaaaaacc	gatctctgcg
26341	ttcgtctacc	agaagtgtgt	tgtatcacia	gagcgaagat	caacttcagc	gcactctcga
26401	ggacgccgag	gctctcttca	acaagtactg	cgcgctgact	cttaaagagt	aggcagtcag
26461	cgcgcttatt	caaaaaaggc	gggaattaca	tcattcctcga	catgagtaaa	gaaattoccca
26521	cgccttacat	gtggagttat	cagccccaaa	tgggattggc	ggcagggccc	tcccaggact
26581	actccaccg	catgaattgg	ctcagcgccc	ggccttctat	gatttctcga	gttaattgata
26641	tacgcgccta	ccgaaaccga	atacttttgg	aacagtcagc	tcttaccacc	acgccccgcc
26701	aacaccttaa	tcccagaaat	tggccccggc	ccctagtgtg	ccaggaaagt	cccgtcccca
26761	ccactgtatt	acttctcga	gacgcccagg	ccgaagtcca	aatgactaat	gcaggtgcgc
26821	agttagcggg	cggctccacc	ctatgtcgtc	acaggcctcg	gcataatata	aaacgcctga
26881	tgatcagagg	cagaggtatc	cagctcaacg	acgagtcggg	gagctctccg	cttgggtctac
26941	gaccagacgg	aatctttcag	attgccggct	cggggagatc	ttccttcacc	cctgctcagg
27001	ctgttctgac	tttggaagt	tctgtctcgc	aacccccgctc	gggcggaatc	gggaccgttc
27061	aatttgtgga	ggagtttact	ccctctgtct	acttcaaccc	cttctccgga	tctcctgggc
27121	actaccgga	cgagttcata	ccgaacttcg	acgcgattag	cgagttagtg	gacggctacg
27181	attgatgtct	ggtgacgcgg	ctgagctatc	tcggctgcga	catctagacc	actgcccgcg
27241	ctttcgtcgc	tttggccggg	aactcattga	gttcatctac	ttcgaactcc	ccaaggatca

FIG. 3A-7

27301	ccctcaaggt	ccggcccacg	gagtgccgat	tactatcgaa	ggcaaaatac	actctcgcct
27361	gcaacgaatt	ttctcccagc	ggcccgtgct	gatcgagcga	gaccagggaa	acaccacggt
27421	ttccatctac	tgcatTTgtA	atcaccccg	attgcatgaa	agcctttgct	gtcttatgtg
27481	tactgagttt	aataaaaaact	gaattaagac	tctcctacgg	actgccgctt	cttcaaccgg
27541	gatttttaca	ccagaagaac	gaaacttttc	ctgtcgtcca	ggactctgtt	aacttcacct
27601	ttcctactca	caaactagaa	gctcaacgac	tacaccgctt	ttccagaagc	atTTtcccta
27661	ctaatactac	tttcaaaacc	ggaggtgagc	tccaaggtct	tcctacagaa	aacccttggg
27721	caagagcggg	ccttgtagtg	ctaggaaattc	ttgcgggtgg	gcttggtgatt	attctttgct
27781	acctatacac	accttgcttc	actttcctag	tggtgttggtg	gtattggttt	aaaaaatggg
27841	gcccatacta	gtcttgcttg	ttttactttc	gcttttgtaa	ccgggttctg	ccaattacga
27901	tccatgtcta	gacttcgacc	cagaaaactg	cacacttact	tttgaccccg	acacaagccg
27961	caactgtgga	gttcttatta	agtgcggtg	ggaatgcagg	tcctgtgaaa	ttcacacaaa
28021	taacaaaacc	tggaacaata	ccttatccac	cacatgggag	ccaggagttc	ccgagtggta
28081	cactgtctct	gtccgaggtc	ctgacggttc	catccgcatt	agtaacaaca	ctttcatttt
28141	ttctgaaatg	tgcatcttg	ccatgttcac	gagcaaacag	tattctctat	ggcctcctag
28201	caagacaac	atcgtaacgt	tctccattgc	ttattgcttg	tgctgttgcc	ttcctttgct
28261	tttactgtgc	gtatgcatac	acctgcttgt	aaccactcgc	atcaaaaacg	ccaataacaa
28321	agaaaaaatg	ccttaacctc	tttctgttta	cagacatggc	ttctcttaca	tctctcatat
28381	ttgtcagcat	tgctactgcc	gctcacggag	aaacagtcgt	ctctatccct	ctaggacata
28441	attacactct	cataggacct	ccaactcact	cagaggtcat	ctgggaacgc	ttcacacacg
28501	ttgattactt	tgatataatc	tgcaacaaaa	caaaaccaat	aatagtaaact	tgcaacatac
28561	aaaatcttac	attgattaat	gttagcaaag	tttacagcgg	ttactattat	ggttatgaca
28621	gatacagtag	tcaatataga	aattacttgg	ttcgtgttac	ccagttaaaa	accacgaaaa
28681	tgccaaatat	ggcaaagatt	cgatccgatg	acaattctct	agaaaactttt	acatctccca
28741	ccacaccgga	cgaaaaaaac	atcccagatt	caatgattgc	aattgttgca	cgggtggcag
28801	tggtgatggc	actaataata	atatgcatgc	ttttatatgc	ttgtcgttac	aaaaagtttc
28861	atcctaaaaa	acaagatctc	ctactaaggc	ttaacattta	atTTtctttt	atacagccat
28921	ggtttccact	accacattcc	ttatgcttac	tagtcttgca	actctgactt	ctgtctgcct
28981	acacctcact	gtaactatag	gctcaaacctg	cacactaaaa	ggacctcaag	tggtgcatgt
29041	cttttggtgg	agaatatatg	acaatggatg	gtttacaaaa	ccatgtgacc	aacctggtag
29101	atTTttctgc	aacggcgag	acctaaccat	tatcaacgtg	acagcaaagt	acaaaggctt
29161	ctattatgga	accgactata	aaagtagttt	agattataac	attattgtac	tgccatctac
29221	cactccagca	cccgcacaaa	ctactttctc	tagcagcagt	gtcgcagagt	gtcgaatttc
29281	caatccaacc	tttgccgcgc	ttttaaaacg	cactgtgaat	aattctacaa	cttcacatac
29341	aacaatttcc	acttcaacaa	tcagcattat	cgctgcagtg	acaattggaa	tatctattct
29401	tgtttttacc	ataacctact	acgcctgctg	ctatagaaaa	gacaaacata	aagggtgatcc
29461	attacttaga	tttgatatTT	aatttgtttc	tttttttttt	atttacaagta	tggtgaacac
29521	caatcatggt	acctagaaat	ttcttcttca	ccatactcat	ttgtgcattt	aatgtttgcy
29581	ctactttcac	agcagtagcc	acagcaaccc	cagactgtat	aggagcattt	gcttcctatg
29641	cactttttgc	ttttgttact	tgcactctcg	tatgtagcat	agtctgcctg	gttattaatt
29701	ttttccaaact	tctagactgg	atcctttgtgc	gaattgccta	cctgcgccac	catcccgaat
29761	accgcaacca	aaatatcgcg	gcacttctta	gactcatcta	aaacctgca	ggctctacta
29821	ccaatatTTT	tgcttctatt	gcttccctac	gctgtctcaa	ccccagctgc	ctatagtact
29881	ccaccagaac	accttagaaa	atgcaaattc	caacaaccgt	ggtcatttct	tgcttgctat
29941	cgagaaaaat	cagaaattcc	cccaaattta	ataatgattg	ctggaataat	taataataatc
30001	tgttgcacca	taatttcatt	tttgatatac	cccctatttg	atTTtgctg	atTTtgctcc
30061	aatgcacatg	atcatccaca	agaccagag	gaacacattc	ccctacaaaa	catgcaacat
30121	ccaatagcgc	taatagatta	cgaaagtga	ccacaacccc	cactactccc	tgctattagt
30181	tacttcaacc	taaccggcgg	agatgactga	aacactcacc	acctccaatt	ccgccgagga
30241	tctgctcgat	atggacggcc	gcgtctcaga	acagcgactt	gccccactac	gcactccgca
30301	gcagcaggaa	cgcgcgccca	aagagctcag	agatgtcatc	caaattcacc	aatgcaaaaa
30361	aggcatattc	tgtttggtaa	aacaagccaa	gatatcctac	gagatcaccg	ctactgacca
30421	tcgcctctct	tacgaacttg	gcccccaacg	acaaaaattt	acctgcatgg	tggaatcaa
30481	ccccatagtt	atcacccagc	aaagtggaga	tactaagggt	tgcatctact	gctcctcgca
30541	ttccatcgag	tgcacctaca	ccctgctgaa	gacctatgc	ggcctaagag	acctgtacc
30601	aatgaattaa	aaaatgatta	ataaaaaatc	acttacttga	aatcagcaat	aagggtctctg
30661	ttgaaatttt	ctcccagcag	cacctcactt	ccctcttccc	aactctggta	ttctaaaccc
30721	cgttcagcgg	catactttct	ccatacttta	aaggggatgt	caaatttttag	ctcctctcct
30781	gtaccacaaa	tcttcatgtc	tttcttccca	gatgaccaag	agagtccggc	tcagtgactc
30841	cttcaaccct	gtctaccctt	atgaagatga	aagcacctcc	caacacccct	ttataaaccc
30901	agggtttatt	tccccaaatg	gcttcacaca	aagcccagac	ggagtcttta	ctttaaaatg
30961	tttaacccca	ctaacaacca	caggcggatc	tctacagcta	aaagtgggag	ggggacttac
31021	agtggatgac	actgatggta	ccttacaaga	aaacatacgt	gctacacgac	ctattactaa
31081	aaataatcac	tctgtagaac	tatccattgg	aaatggatta	gaaactcaaa	acaataaact
31141	atgtgccaaa	ttgggaaatg	ggttaaaatt	taacaacggt	gacatttgta	taaaggatag

FIG. 3A-8

31201	tattaacacc	ttatggactg	gaataaaccc	tccacctaac	tgtcaaattg	tggaaaacac
31261	taatacaaat	gatggcaaac	ttacttttagt	attagtaaaa	aacggagggc	ttgttaatgg
31321	ctacgtgtct	ctagttgggtg	tatcagacac	tgtgaaccac	atgttcacac	aaaagacagc
31381	aaacatccaa	ttaagattat	attttgactc	ttctggaaat	ctattaactg	atgaatcaga
31441	cttaaaaatt	ccacttaaaa	ataaatcttc	tacagcgacc	agtgaactg	tagccagcag
31501	caaagccttt	atgccaaagta	ctacagctta	tcccttcaac	accactacta	gggatagtga
31561	aaactacatt	catggaatat	gttactacat	gactagttaa	gatagaagtc	tatttccctt
31621	gaacattttct	ataatgctaa	acagccgtat	gatttcttcc	aatgttgctt	atgccataca
31681	atttgaatgg	aatctaaatg	caagtgaatc	tccagaaaagc	aacatagcta	cgctgaccac
31741	atcccccttt	ttcttttctt	acattacaga	agacgacaac	taaaataaag	tttaagtgtt
31801	tttatttaaa	atcacaaaa	tcgagttagtt	attttgcctc	caccttccca	tttgacagaa
31861	taccaccaatc	tctccccacg	cacagcttta	aacatttggg	taccattaga	gatagacatt
31921	gttttagatt	ccacattcca	aacagtttca	gagcgagcca	atctgggggtc	agtgatagat
31981	aaaaatccat	cgcgatagtc	ttttaaagcg	ctttcacagt	ccaactgctg	cggatgcgaa
32041	tccggagtc	ggatcacggg	catctggaag	aagaacgatg	ggaatcataa	tccgaaaacg
32101	gtatcggtc	attgtgtctc	atcgaaccca	caagcagccg	ctgtctcgctg	cgctccgtgc
32161	aactgctgtt	tatgggatca	gggtccacag	tgtcctgaag	catgatttta	atagccctta
32221	acatcaactt	tctggtgcga	tgcgcgcagc	aacgcattct	gatttctactc	aaatctttgc
32281	agtaggtaca	acacattatt	acaatatgtt	ttaataaacc	ataattaaaa	gcgctccagc
32341	caaaactcat	atctgatata	atcgcccttg	catgaccatc	ataccataaa	ttaatataaa
32401	ttaaatgacg	ttccctcaaa	aacacactac	ccacatacat	gatctctttt	ggcatgtgca
32461	tattaacaat	ctgtctgtac	catggacaac	gttggttaat	catgcaaccc	aatataacct
32521	tccggaacca	cactgccaac	accgctcccc	cagccatgca	ttgaagtga	ccctgctgat
32581	tacaatgaca	atgaagaacc	caattctctc	gaccgtgaat	cacttgagaa	tgaataatat
32641	ctatagtggc	acaacataga	cataaatgca	tgcattcttct	cataattttt	aactcctcag
32701	gatttagaaa	catatcccag	ggaataggaa	gctcttgca	aacagtaaag	ctggcagaac
32761	aaggaagacc	acgaacacaa	cttacactat	gcatagtcac	agtatcacaa	tctggcaaca
32821	gcgggtgggc	ttcagtcata	gaagctcggt	tttcattttc	ctcacacagt	ggtaactggg
32881	ctctgggtga	aggggtgatgt	tgcgcgcagc	atgtcgagcg	tgcgcgcaac	tgtgtcataa
32941	tggagttgct	tcttgacatt	ctcgtatttt	gtatagcaaa	acgcggccct	ggcagaacac
33001	actcttcttc	gccttctatc	ctgcgcgtta	gcgtgttccg	tgtgatagtt	caagtacagc
33061	cacactctta	agttgggtcaa	aagaatgctg	gcttcagttg	taatcaaaac	tccatcgcat
33121	tacaattgttc	tgaggaaatc	atccacggtg	gcatatgcaa	atcccaacca	agcaatgcaa
33181	ctggatttgcg	tttcaagcag	gagaggagag	ggaagagacg	gaagaaccat	gttaattttt
33241	attccaaacg	atctcgcagt	acttcaaatt	gtagatcgcg	cagatggcat	ctctcgcccc
33301	cactgtgttg	gtgaaaaagc	acagctaaat	caaaagaaat	gcgattttca	aggtgctcaa
33361	cggtggcttc	caacaaagcc	tccacgcgca	cattccaagaa	caaaagaatg	ccaaaagaag
33421	gagcattttc	taactcctca	atcatcatat	tacattcctg	caccattccc	agataatttt
33481	cagctttcca	gccttgaatt	attcgtgtca	gttcttgtgg	taaatccaat	ccacacatta
33541	caaacaggtc	ccggagggcg	ccctccacca	ccattcttaa	acacaccctc	ataatgacaa
33601	aatatcttgc	tctgtgtcga	ctgtagcga	attgagaatg	gcaacatcaa	ttgacatgcc
33661	cttggtctta	agttcttctt	taagttctag	ttgtaaaaac	tctctcatat	tatcaccaaa
33721	ctgcttagcc	agaagccccc	cggaacaag	agcaggggac	gctacagtgc	agtacaagcg
33781	cagacctccc	caattggctc	cagcaaaaac	aagattggaa	taagcatatt	gggaaccgcc
33841	agtaatatca	tcgaagttag	tggaaatata	atcaggcaga	gtttcttgta	aaaattgaa
33901	aaaagaaaaa	tttgccaaaa	aaacattcaa	aacctctggg	atgcaaattg	aatagggtac
33961	cgcgctgcgc	tccaacattg	ttagttttga	attagtctgc	aaaaataaaa	aaaaaaacaa
34021	gcgtcatatc	atagtagcct	gacgaacagg	tggataaaatc	agtctttcca	tcacaagaca
34081	agccacaggg	tctccagctc	gacctctgta	aaacctgtca	tggtgattaa	acaacagcac
34141	cgaaagtctc	tcgcggtgac	cagcatgaat	aattcttgat	gaagcataca	atccagacat
34201	gttagcatca	gttaacgaga	aaaaacagcc	aacatagcct	ttgggtataa	ttatgcttaa
34261	tcgtaagtat	agcaaagcca	cccctcgcgg	atacaaagta	aaaggcacag	gagaataaaa
34321	aatataatta	tttctctgct	gctgttcagg	caacgtcgcc	cccgttccct	ctaaatacac
34381	atacaaagcc	tcattcagcca	tggtttacca	gacaaaagta	agcgggacag	cacaagctct
34441	aaagtcactc	tccaacctct	ccacaatata	tatacacaa	ccctaaactg	acgtaattgg
34501	agtaaaagtgt	aaaaaatccc	gccaaaccca	acacacaccc	cgaaactcg	tcaccagggg
34561	aaagtacagt	ttcacttccg	caatcccaac	aagcgtcact	tcctctttct	cacggtacgt
34621	cagatcccat	taacttgcaa	cgctcatttt	ccacggccgc	gccgcgccgt	ttagccgtta
34681	acccacagc	caatcaccac	acacccca	atttttaaaa	tcacctcatt	tacatattgg
34741	caccattcca	tctataaggt	atattattga	tgatg		

FIG. 3A-9

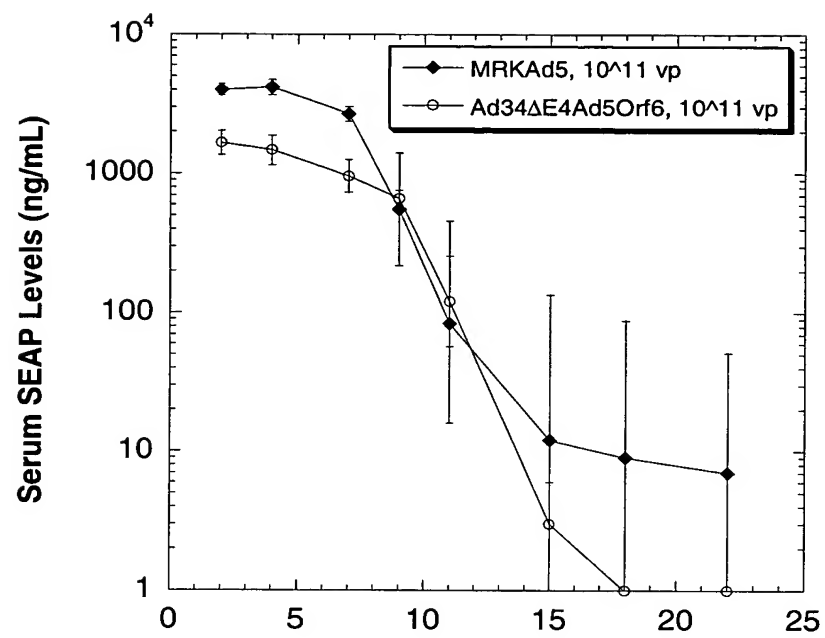


FIG. 4

Vaccine Wk 0, 4, 24	Monkey ID	Pre		Wk 4		Wk 8		Wk 24		Wk 28		Wk 36	
		Mock	Gag ^a	Mock	Gag	Mock	Gag	Mock	Gag	Mock	Gag	Mock	Gag
MRKAd5gag, 10 ⁴ 11 vp	00C018	1	5	13	1025	0	824	8	756	0	474	0	383
MRKAd5gag, 10 ⁴ 11 vp	00C034	0	4	5	219	5	404	3	445	3	339	0	216
MRKAd5gag, 10 ⁴ 11 vp	00C058	4	4	3	1086	0	440	4	1439	0	2338	0	940
Ad34ΔE1gagΔE4Ad5Orf6, 10 ⁴ 11 vp	00D038	6	8	5	111	1	301	0	224	1	536	0	233
Ad34ΔE1gagΔE4Ad5Orf6, 10 ⁴ 11 vp	00D042	6	30	4	89	4	264	1	73	0	181	0	69
Ad34ΔE1gagΔE4Ad5Orf6, 10 ⁴ 11 vp	00D066	3	18	1	118	1	816	0	429	0	439	0	273

FIG. 5

Vaccine	Monk ID	IFN- γ ⁺ CD4 ⁺ CD3 ⁺ per 10 ⁶ Lymphocytes		IFN- γ ⁺ CD8 ⁺ CD3 ⁺ per 10 ⁶ Lymphocytes	
		Mock	Gag ^a	Mock	Gag ^a
Ad34ΔE1gagΔE4Ad5Orf6	00D038	22	154	130	450
	00D042	32	118	96	171
	00D066	12	238	150	442

FIG. 6

Sequence of the open reading frame for FL-gag (human codon optimized)

atgggtgctagggcttctgtgctgtctgggtgggtgagctggacaagtgggagaagatcaggctgaggcctgggtggc
aagaagaagtacaagctaaagcacattgtgtggggcctccagggagctggagagggtttgctgtgaaccctggcctg
ctggagacctctgaggggtgcaggcagatcctggggccagctccagccctccctgcaaacaggctctgaggagctg
aggccccctgtacaacacagtggtaccctgtactgtgtgcaccagaagattgatgtgaaggacaccaaggaggcc
ctggagaagattgaggaggagcagaacaagtccaagaagaaggcccagcaggctgctgctggcacaggcaactcc
agccaggtgtcccagaactaccccatgtgtgcagaacctccagggccagatgggtgcaccaggccatctccccccgg
accctgaatgcctgggtgaaggtgggtggaggagaaggccttctccccctgaggtgatccccatgttctctgcctg
tctgaggggtgccacccccagggacctgaacaccatgctgaacacagtggggggccatcaggctgccatgcagatg
ctgaaggagaccatcaatgaggaggctgctgagtgggacaggctgcacccctgtgcacgctggccccattgcccc
ggccagatgagggagcccaggggtcttgacattgctggcaccacctccacctccaggagcagattggctggatg
accaacaacccccccatccctgtgggggaaatctacaagaggtggatcatcctgggcctgaacaagattgtgagg
atgtactccccacctccatcctggacatcaggcagggccccaaggagcccttcaggggactatgtggacagggtc
tacaagaccctgagggctgagcaggcctcccaggaggtgaagaactggatgacagagaccctgctggtgcagaat
gccaaccttgactgcaagaccatcctgaaggccctggggcctgctgccaccctggaggagatgatgacagcctgc
cagggggtggggggccctggtcacaaggccaggggtgctggctgaggccatgtcccagggtgaccaactccgccacc
atcatgatgcagagggggcaacttcaggaaccagaggaagacagtggaagtgttcaactgtggcaagggtggggccac
attgccaagaactgtaggggccccaggaagaagggtgctggaagtgtggcaaggaggccaccagatgaaggac
tgcaatgagagggcaggccaacttcctgggcaaaaatctggccctcccacaagggcaggcctggcaacttcctccag
tccaggcctgagcccacagccccctcccaggagatccttcagggtttggggaggagaagaccacccccagccagaag
caggagcccattgacaaggagctgtacccccctggcctccctgaggtccctgtttggcaacgacccctcctcccag
taaaataaagccccgggcagat

FIG. 7

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1 ccattgcata cgttgatatcc atatcataat atgtacattt atattggctc atgtccaaca
61 ttaccggccat gttgacattg attattgact agttattaat agtaatcaat tacgggggtca
121 ttagttcata gcccatatat ggagttccgc gttacataac ttaccggtaaa tggcccgct
181 ggctgaccgc ccaacgaccc cgcgccattg acgtcaataa tgacgtatgt tcccatagta
241 acgccaatag ggactttcca ttgacgtcaa tgggtggagt atttacggta aactgccac
301 ttggcagtac atcaagtgt tcatatgcc agtacgcccc ctattgacgt caatgacggt
361 aaatggcccg cctggcatta tgcccagtac atgaccttat gggactttcc tacttggcag
421 tacatctacg tattagtcac cgctattacc atgggtgatgc ggttttggca gtacatcaat
481 gggcggtgat agcgggttga ctacagggga tttccaagtc tccaccccat tgacgtcaat
541 gggagtttgt tttggcacca aaatcaacgg gactttccaa aatgtcgtaa caactccgcc
601 ccattgacgc aaatgggagg taggcgtgta cgggtgggagg tctatataag cagagctcgt
661 ttagtgaacc gtcagatcgc ctggagacgc catccacgct gttttgacct ccatagaaga
721 caccgggacc gatccagcct cgcgggccgg gaacgggtgca ttggaacgcg gattccccgt
781 gccaaagagt agatctacca TGGGTGCTAG GGCTTCTGTG CTGTCTGGTG GTGAGCTGGA
841 CAAGTGGGAG AAGATCAGGC TGAGGCCTGG TGGCAAGAAG AAGTACAAGC TAAAGCACAT
901 TGTGTGGGCC TCCAGGGAGC TGGAGAGGTT TGCTGTGAAC CCTGGCCTGC TGGAGACCTC
961 TGAGGGGTGC AGGCAGATCC TGGGCCAGCT CCAGCCCTCC CTGCAAACAG GCTCTGAGGA
1021 GCTGAGGTCC CTGTACAACA CAGTGGCTAC CCTGTACTGT GTGCACCAGA AGATTGATGT
1081 GAAGGACACC AAGGAGGCC TGGAGAAGAT TGAGGAGGAG CAGAACAAGT CCAAGAAGAA
1141 GGGCCAGCAG GCTGCTGCTG GCACAGGCAA CTCCAGCCAG GTGTCCCGA ACTACCCCAT
1201 TGTGCAGAAC CTCCAGGGCC AGATGGTGCA CCAGGCCATC TCCCCCGGA CCCTGAATGC
1261 CTGGGTGAAG GTGGTGGAGG AGAAGGCCTT CTCCCCTGAG GTGATCCCCA TGTCTCTGTC
1321 CCTGTCTGAG GGTGCCACCC CCCAGGACCT GAACACCATG CTGAACACAG TGGGGGGCCA
1381 TCAGGCTGCC ATGCAGATGC TGAAGGAGAC CATCAATGAG GAGGCTGCTG AGTGGGACAG
1441 GCTGCATCCT GTGCACGCTG GCCCCATTGC CCCCAGCCAG ATGAGGGAGC CCAGGGGCTC
1501 TGACATTGCT GGCACCACCT CCACCCTCCA GGAGCAGATT GGCTGGATGA CCAACAACCC
1561 CCCCATCCCT GTGGGGGAAA TCTACAAGAG GTGGATCATC CTGGGCCCTG ACAAGATTGT
1621 GAGGATGTAC TCCCCACCT CCATCCTGGA CATCAGGCAG GGCCCCAAGG AGCCCTTCAG
1681 GGAATATGTG GACAGGTTCT ACAAGACCCT GAGGGCTGAG CAGGCCTCCC AGGAGGTGAA
1741 GAAGTGGATG ACAGAGACCC TGCTGGTGCA GAATGCCAAC CCTGACTGCA AGACCATCCT
1801 GAAGGCCCTG GGCCCTGCTG CCACCCTGGA GGAGATGATG ACAGCCTGCC AGGGGGTGGG
1861 GGGCCCTGGT CACAAGGCCA GGGTGCTGGC TGAGGCCATG TCCCAGGTGA CCAACTCCGC
1921 CACCATCATG ATGCAGAGGG GCAACTTCAG GAACAGAGG AAGACAGTGA AGTGCTTCAA
1981 CTGTGGCAAG GTGGGCCACA TTGCCAAGAA CTGTAGGGCC CCCAGGAAGA AGGGCTGCTG
2041 GAAGTGTGGC AAGGAGGGCC ACCAGATGAA GGAATGCAAT GAGAGGCAGG CCAACTTCCT
2101 GGGCAAAATC TGGCCCTCCC ACAAGGGCAG GCCTGGCAAC TTCTTCCAGT CCAGGCCTGA
2161 GCCCACAGCC CCTCCCGAGG AGTCCTTCAG GTTTGGGGAG GAGAAGACCA CCCCAGCCA
2221 GAAGCAGGAG CCCATTGACA AGGAGCTGTA CCCCCTGGCC TCCCTGAGGT CCCTGTTTGG
2281 CAACGACCCC TCCTCCCAGT AAaataaagc cggggcagat ctgatctgct gtgccttcta
2341 gttgccagcc atctgttgtt tgcccctccc ccgtgccttc cttgacctg gaaggtgcca
2401 ctcccactgt ctttctctaa taaaatgagg aaattgcate gcattgtctg agtaggtgct
2461 attctattct ggggggtggg gtggggcagc acagcaaggg ggaggattgg gaagacaata
2521 gcaggcatgc tggggatgcg gtgggctcta

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SEQ ID NO: 2

FIG. 8

1	ccattgcata	cgttgtatcc	atatcataat	atgtacattt	atattggctc	atgtccaaca
61	ttaccgccat	gttgacattg	attattgact	agttattaat	agtaatcaat	tacgggggtca
121	ttagttcata	gcccataat	ggagttccgc	gttacataac	ttacggtaaa	tggcccgcct
181	ggctgaccgc	ccaacgaccc	ccgcccattg	acgtcaataa	tgacgtatgt	tcccatagta
241	acgccaatag	ggactttcca	ttgacgtcaa	tgggtggagt	atttacggta	aactgcccac
301	ttggcagtac	atcaagtgt	tcatatgcca	agtacgcccc	ctattgacgt	caatgacggg
361	aaatggcccg	cctggcatta	tgcccagtac	atgaccttat	gggactttcc	tacttggcag
421	tacatctacg	tattagtcac	cgctattacc	atgggtgatgc	ggttttggca	gtacatcaat
481	gggcgtggat	agcgggttga	ctcacgggga	tttccaagtc	tccaccccat	tgacgtcaat
541	gggagtttgt	tttggcacca	aaatcaacgg	gactttccaa	aatgtcgtaa	caactccgcc
601	ccattgacgc	aaatgggagg	taggcgtgta	cggtgggagg	tctatataag	cagagctcgt
661	ttagtgaacc	gtcagatcgc	ctggagacgc	catccacgct	gttttgacct	ccatagaaga
721	caccgggacc	gatccagcct	ccgcgcccg	gaacgggtgca	ttggaacgcg	gattccccgt
781	gccaagagtg	agatctaagt	aagcttcctg	cATGCTGCTG	CTGCTGCTGC	TGCTGGGCCT
841	GAGGCTACAG	CTCTCCCTGG	GCATCATCCC	AGTTGAGGAG	GAGAACCCGG	ACTTCTGGAA
901	CCGCGAGGCA	GCCGAGGCC	TGGGTGCCGC	CAAGAAGCTG	CAGCCTGCAC	AGACAGCCGC
961	CAAGAACCCTC	ATCATCTTCC	TGGGCGATGG	GATGGGGGTG	TCTACGGTGA	CAGCTGCCAG
1021	GATCCTAAAA	GGGCAGAAGA	AGGACAAACT	GGGGCCTGAG	ATACCCCTGG	CCATGGACCG
1081	CTTCCCCTAT	GTGGCTCTGT	CCAAGACATA	CAATGTAGAC	AAACATGTGC	CAGACAGTGG
1141	AGCCACAGCC	ACGGCCTACC	TGTGCGGGGT	CAAGGGCAAC	TTCCAGACCA	TTGGCTTGAG
1201	TGCAGCCGCC	CGCTTTAACC	AGTGCAACAC	GACACGCGGC	AACGAGGTCA	TCTCCGTGAT
1261	GAATCGGGCC	AAGAAAGCAG	GGAAGTCAGT	GGGAGTGGTA	ACCACCACAC	GAGTGCAGCA
1321	CGCCTCGCCA	GCCGGCACCT	ACGCCCACAC	GGTGAACCGC	AACTGGTACT	CGGACGCCGA
1381	CGTGCCTGCC	TCCGCCCGCC	AGGAGGGGTG	CCAGGACATC	GCTACGCAGC	TCATCTCCAA
1441	CATGGACATT	GACGTGATCC	TAGGTGGAGG	CCGAAAGTAC	ATGTTTCGCA	TGGGAACCCC
1501	AGACCCTGAG	TACCCAGATG	ACTACAGCCA	AGGTGGGACC	AGGCTGGACG	GGAAGAATCT
1561	GGTGCAGGAA	TGGCTGGCGA	AGCGCCAGGG	TGCCCCGTAT	GTGTGGAACC	GCACTGAGCT
1621	CATGCAGGCT	TCCCTGGACC	CGTCTGTGAC	CCATCTCATG	GGTCTCTTTG	AGCCTGGAGA
1681	CATGAAATAC	GAGATCCACC	GAGACTCCAC	ACTGGACCCC	TCCCTGATGG	AGATGACAGA
1741	GGCTGCCCTG	CGCCTGCTGA	GCAGGAACCC	CCGCGGCTTC	TTCTCTTCG	TGGAGGGTGG
1801	TCGCATCGAC	CATGGTCATC	ATGAAAGCAG	GGCTTACCGG	GCACTGACTG	AGACGATCAT
1861	GTTCGACGAC	GCCATTGAGA	GGGCGGGCCA	GCTCACCAGC	GAGGAGGACA	CGCTGAGCCT
1921	CGTCACTGCC	GACCACTCCC	ACGTCTTCTC	CTTCGGAGGC	TACCCCTTGC	GAGGGAGCTC
1981	CATCTTCGGG	CTGGCCCCCTG	GCAAGGCCCG	GGACAGGAAG	GCCTACACGG	TCCTCTTATA
2041	CGGAAACGGT	CCAGGCTATG	TGCTCAAGGA	CGGCGCCCCG	CCGGATGTTA	CCGAGAGCGA
2101	GAGCGGGAGC	CCCAGATATC	GGCAGCAGTC	AGCAGTGCCC	CTGGACGAAG	AGACCCACGC
2161	AGGCGAGGAC	GTGGCGGTGT	TCGCGCGCGG	CCGCGAGGCG	CACCTGGTTC	ACGGCGTGCA
2221	GGAGCAGACC	TTCATAGCGC	ACGTCATGGC	CTTCGCCGCC	TGCTTGGAGC	CCTACACCGC
2281	CTGCGACCTG	GCGCCCCCGG	CCGGCACACC	CGACGCCCGG	CACCCGGGTT	AAcccggtgt
2341	ccccgcgttg	cttcctctgc	tggccgggac	atcaggtggc	ccccgcgtga	ttggaatcga
2401	tcagaattca	gtcgacgata	tctgatcacg	atctgatctg	ctgtgccttc	tagttgccag
2461	ccatctgttg	tttgcccctc	ccccgtgctt	tccttgacct	tgggaagggtg	cactcccact
2521	gtccttttct	aataaaatga	ggaaattgca	tcgcattgtc	tgagttaggtg	tcattctatt
2581	ctgggggggtg	gggtggggca	gcacagcaag	ggggaggatt	gggaagacaa	tagcaggcat
2641	gctgggggatg	cggtgggctc	ta			

FIG. 9

PacI
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|     |                           |                          |                          |                           |                          |
|-----|---------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| 1   | TTCTTAATTA<br>AAGAATTAAT  | ACATCATCAA<br>TGTAGTAGTT | TAATATACCT<br>ATTATATGGA | TATTTTGGAT<br>ATAAAACCTA  | TGAAGCCAAT<br>ACTTCGGTTA |
| 51  | ATGATAATGA<br>TACTATTACT  | GGGGGTGGAG<br>CCCCACCTC  | TTTGTGACGT<br>AAACACTGCA | GGCGCGGGGC<br>CCGCGCCCCG  | GTGGGAACGG<br>CACCCTTGCC |
| 101 | GGCGGGTGAC<br>CCGCCCACTG  | GTAGTAGTGT<br>CATCATCACA | GGCGGAAGTG<br>CCGCCTTCAC | TGATGTTGCA<br>ACTACAACGT  | AGTGTGGCGG<br>TCACACCGCC |
| 151 | AACACATGTA<br>TTGTGTACAT  | AGCGACGGAT<br>TCGCTGCCTA | GTGGCAAAAG<br>CACCGTTTTT | TGACGTTTTT<br>ACTGCAAAAA  | GGTGTGCGCC<br>CCACACGCGG |
| 201 | GGTGTAACACA<br>CCACATGTGT | GGAAGTGACA<br>CCTTCACTGT | ATTTTCGCGC<br>TAAAAGCGCG | GGTTTTAGGC<br>CCAAAATCCG  | GGATGTTGTA<br>CCTACAACAT |
| 251 | GTAAATTTGG<br>CATTTAAACC  | GCGTAACCGA<br>CGCATTGGCT | GTAAGATTTG<br>CATTCTAAAC | GCCATTTTCG<br>CGGTAAAAGC  | CGGGAAAAC<br>GCCCTTTTGA  |
| 301 | GAATAAGAGG<br>CTTATTCTCC  | AAGTGAAATC<br>TTCACTTTAG | TGAATAATTT<br>ACTTATTAAA | TGTGTTACTC<br>ACACAATGAG  | ATAGCGCGTA<br>TATCGCGCAT |
| 351 | ATATTTGTCT<br>TATAAACAGA  | AGGGCCGCGG<br>TCCCGGCGCC | GGACTTTGAC<br>CCTGAAACTG | CGTTTACGTG<br>GCAAATGCAC  | GAGACTCGCC<br>CTCTGAGCGG |
| 401 | CAGGTGTTTT<br>GTCCACAAAA  | TCTCAGGTGT<br>AGAGTCCACA | TTTCCGCGTT<br>AAAGGCGCAA | CCGGGTCAAA<br>GGCCCAGTTT  | GTTGGCGTTT<br>CAACCGCAAA |
| 451 | TATTATTATA<br>ATAATAATAT  | GGCGGCCGCG<br>CCGCCGGCGC | ATCCATTGCA<br>TAGGTAACGT | TACGTTGTAT<br>ATGCAACATA  | CCATATCATA<br>GGTATAGTAT |
| 501 | ATATGTACAT<br>TATACATGTA  | TTATATTGGC<br>AATATAACCG | TCATGTCCAA<br>AGTACAGGTT | CATTACCGCC<br>GTAATGGCGG  | ATGTTGACAT<br>TACAACGTGA |
| 551 | TGATTATTGA<br>ACTAATAACT  | CTAGTTATTA<br>GATCAATAAT | ATAGTAATCA<br>TATCATTAGT | ATTACGGGGT<br>TAATGCCCCA  | CATTAGTTCA<br>GTAATCAAGT |
| 601 | TAGCCCATAT<br>ATCGGGTATA  | ATGGAGTTCC<br>TACCTCAAGG | GCGTTACATA<br>CGCAATGTAT | ACTTACGGTA<br>TGAATGCCAT  | AATGGCCCGC<br>TTACCGGGCG |
| 651 | CTGGCTGACC<br>GACCGACTGG  | GCCCAACGAC<br>CGGGTTGCTG | CCCCGCCCAT<br>GGGGCGGGTA | TGACGTCAAT<br>ACTGCAGTTA  | AATGACGTAT<br>TTACTGCATA |
| 701 | GTTCCCATAG<br>CAAGGGTATC  | TAACGCCAAT<br>ATTGCGGTTA | AGGGACTTTC<br>TCCCTGAAAG | CATTGACGTC<br>GTAACCTGCAG | AATGGGTGGA<br>TTACCCACCT |
| 751 | GTATTTACGG<br>CATAAATGCC  | TAAACTGCCC<br>ATTTGACGGG | ACTTGGCAGT<br>TGAACCGTCA | ACATCAAGTG<br>TGTAGTTCAC  | TATCATATGC<br>ATAGTATACG |

FIG. 10A-1

|      |             |             |             |            |            |
|------|-------------|-------------|-------------|------------|------------|
| 801  | CAAGTACGCC  | CCCTATTGAC  | GTCAATGACG  | GTAAATGGCC | CGCCTGGCAT |
|      | GTTTCATGCGG | GGGATAACTG  | CAGTTACTGC  | CATTTACCGG | GCGGACCGTA |
| 851  | TATGCCCAGT  | ACATGACCTT  | ATGGGACTTT  | CCTACTTGGC | AGTACATCTA |
|      | ATACGGGTCA  | TGTACTGGAA  | TACCCTGAAA  | GGATGAACCG | TCATGTAGAT |
| 901  | CGTATTAGTC  | ATCGCTATTA  | CCATGGTGAT  | GCGGTTTTTG | CAGTACATCA |
|      | GCATAATCAG  | TAGCGATAAT  | GGTACCACTA  | CGCCAAAACC | GTCATGTAGT |
| 951  | ATGGGCGTGG  | ATAGCGGTTT  | GACTCACGGG  | GATTTCCAAG | TCTCCACCCC |
|      | TACCCGCACC  | TATCGCCAAA  | CTGAGTGCCC  | CTAAAGGTTC | AGAGGTGGGG |
| 1001 | ATTGACGTCA  | ATGGGAGTTT  | GTTTTGGCAC  | CAAAATCAAC | GGGACTTTCC |
|      | TAAGTGCAGT  | TACCCTCAAA  | CAAACCGTG   | GTTTTAGTTG | CCCTGAAAGG |
| 1051 | AAAATGTCGT  | AACAACCTCCG | CCCCATTGAC  | GCAAATGGGC | GGTAGGCGTG |
|      | TTTTACAGCA  | TTGTTGAGGC  | GGGGTAACTG  | CGTTTACCCG | CCATCCGCAC |
| 1101 | TACGGTGGGA  | GGTCTATATA  | AGCAGAGCTC  | GTTTAGTGAA | CCGTCAGATC |
|      | ATGCCACCCT  | CCAGATATAT  | TCGTCTCGAG  | CAAATCACTT | GGCAGTCTAG |
| 1151 | GCCTGGAGAC  | GCCATCCACG  | CTGTTTTGAC  | CTCCATAGAA | GACACCGGGA |
|      | CGGACCTCTG  | CGGTAGGTGC  | GACAAAACCTG | GAGGTATCTT | CTGTGGCCCT |
| 1201 | CCGATCCAGC  | CTCCGCGGCC  | GGGAACGGTG  | CATTGGAACG | CGGATTCCCC |
|      | GGCTAGGTCG  | GAGGCGCCGG  | CCCTTGCCAC  | GTAACCTTGC | GCCTAAGGGG |
| 1251 | GTGCCAAGAG  | TGAGATCTAC  | CATGGGTGCT  | AGGGCTTCTG | TGCTGTCTGG |
|      | CACGGTTCTC  | ACTCTAGATG  | GTACCCACGA  | TCCCGAAGAC | ACGACAGACC |
| 1301 | TGGTGAGCTG  | GACAAGTGGG  | AGAAGATCAG  | GCTGAGGCCT | GGTGGCAAGA |
|      | ACCACTCGAC  | CTGTTCACCC  | TCTTCTAGTC  | CGACTCCGGA | CCACCGTTCT |
| 1351 | AGAAGTACAA  | GCTAAAGCAC  | ATTGTGTGGG  | CCTCCAGGGA | GCTGGAGAGG |
|      | TCTTCATGTT  | CGATTTCTGT  | TAACACACCC  | GGAGGTCCCT | CGACCTCTCC |
| 1401 | TTTGCTGTGA  | ACCCTGGCCT  | GCTGGAGACC  | TCTGAGGGGT | GCAGGCAGAT |
|      | AAACGACACT  | TGGGACCGGA  | CGACCTCTGG  | AGACTCCCCA | CGTCCGTCTA |
| 1451 | CCTGGGCCAG  | CTCCAGCCCT  | CCCTGCAAAC  | AGGCTCTGAG | GAGCTGAGGT |
|      | GGACCCGGTC  | GAGGTCGGGA  | GGGACGTTTG  | TCCGAGACTC | CTCGACTCCA |
| 1501 | CCCTGTACAA  | CACAGTGGCT  | ACCCTGTACT  | GTGTGCACCA | GAAGATTGAT |
|      | GGGACATGTT  | GTGTCACCGA  | TGGGACATGA  | CACACGTGGT | CTTCTAACTA |
| 1551 | GTGAAGGACA  | CCAAGGAGGC  | CCTGGAGAAG  | ATTGAGGAGG | AGCAGAACAA |
|      | CACTTCCTGT  | GGTTCCTCCG  | GGACCTCTTC  | TAAGTCCTCC | TCGTCTTGTT |

FIG. 10A-2

|      |            |             |            |            |            |
|------|------------|-------------|------------|------------|------------|
| 1601 | GTCCAAGAAG | AAGGCCCAGC  | AGGCTGCTGC | TGGCACAGGC | AACTCCAGCC |
|      | CAGGTTCTTC | TTCCGGGTCG  | TCCGACGACG | ACCGTGTCCG | TTGAGGTCGG |
| 1651 | AGGTGTCCCA | GAACTACCCC  | ATTGTGCAGA | ACCTCCAGGG | CCAGATGGTG |
|      | TCCACAGGGT | CTTGATGGGG  | TAACACGTCT | TGGAGGTCCC | GGTCTACCAC |
| 1701 | CACCAGGCCA | TCTCCCCCCG  | GACCCTGAAT | GCCTGGGTGA | AGGTGGTGGA |
|      | GTGGTCCGGT | AGAGGGGGGC  | CTGGGACTTA | CGGACCCACT | TCCACCACCT |
| 1751 | GGAGAAGGCC | TTCTCCCCTG  | AGGTGATCCC | CATGTTCTCT | GCCCTGTCTG |
|      | CCTCTTCCGG | AAGAGGGGAC  | TCCACTAGGG | GTACAAGAGA | CGGGACAGAC |
| 1801 | AGGGTGCCAC | CCCCCAGGAC  | CTGAACACCA | TGCTGAACAC | AGTGGGGGGC |
|      | TCCCACGGTG | GGGGGTCCCTG | GACTTGTGGT | ACGACTTGTG | TCACCCCCCG |
| 1851 | CATCAGGCTG | CCATGCAGAT  | GCTGAAGGAG | ACCATCAATG | AGGAGGCTGC |
|      | GTAGTCCGAC | GGTACGTCTA  | CGACTTCCTC | TGGTAGTTAC | TCCTCCGACG |
| 1901 | TGAGTGGGAC | AGGCTGCATC  | CTGTGCACGC | TGGCCCCATT | GCCCCCGGCC |
|      | ACTCACCTG  | TCCGACGTAG  | GACACGTGCG | ACCGGGGTAA | CGGGGGCCGG |
| 1951 | AGATGAGGGA | GCCCAGGGGC  | TCTGACATTG | CTGGCACCAC | CTCCACCCTC |
|      | TCTACTCCCT | CGGGTCCCCG  | AGACTGTAAC | GACCGTGGTG | GAGGTGGGAG |
| 2001 | CAGGAGCAGA | TTGGCTGGAT  | GACCAACAAC | CCCCCATCC  | CTGTGGGGGA |
|      | GTCCTCGTCT | AACCGACCTA  | CTGGTTGTTG | GGGGGGTAGG | GACACCCCCT |
| 2051 | AATCTACAAG | AGGTGGATCA  | TCCTGGGCCT | GAACAAGATT | GTGAGGATGT |
|      | TTAGATGTTT | TCCACCTAGT  | AGGACCCGGA | CTTGTTCTAA | CACTCCTACA |
| 2101 | ACTCCCCCAC | CTCCATCCTG  | GACATCAGGC | AGGGCCCCAA | GGAGCCCTTC |
|      | TGAGGGGGTG | GAGGTAGGAC  | CTGTAGTCCG | TCCGGGGGTT | CCTCGGGAAG |
| 2151 | AGGGACTATG | TGGACAGGTT  | CTACAAGACC | CTGAGGGCTG | AGCAGGCCTC |
|      | TCCCTGATAC | ACCTGTCCAA  | GATGTTCTGG | GACTCCCGAC | TCGTCCGGAG |
| 2201 | CCAGGAGGTG | AAGAACTGGA  | TGACAGAGAC | CCTGCTGGTG | CAGAATGCCA |
|      | GGTCCTCCAC | TTCTTGACCT  | ACTGTCTCTG | GGACGACCAC | GTCTTACGGT |
| 2251 | ACCCTGACTG | CAAGACCATC  | CTGAAGGCC  | TGGGCCCTGC | TGCCACCCTG |
|      | TGGGACTGAC | GTTCTGGTAG  | GACTTCCGGG | ACCGGGGACG | ACGGTGGGAC |
| 2301 | GAGGAGATGA | TGACAGCCTG  | CCAGGGGGTG | GGGGGCCCTG | GTCACAAGGC |
|      | CTCCTCTACT | ACTGTCGGAC  | GGTCCCCCAC | CCCCCGGGAC | CAGTGTTCCG |
| 2351 | CAGGGTGCTG | GCTGAGGCCA  | TGTCCCAGGT | GACCAACTCC | GCCACCATCA |
|      | GTCCCACGAC | CGACTCCGGT  | ACAGGGTCCA | CTGGTTGAGG | CGGTGGTAGT |

FIG. 10A-3

|      |                           |                          |                          |                          |                          |
|------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2401 | TGATGCAGAG<br>ACTACGTCTC  | GGGCAACTTC<br>CCCGTTGAAG | AGGAACCAGA<br>TCCTTGGTCT | GGAAGACAGT<br>CCTTCTGTCA | GAAGTGCTTC<br>CTTCACGAAG |
| 2451 | AACTGTGGCA<br>TTGACACCGT  | AGGTGGGCCA<br>TCCACCCGGT | CATTGCCAAG<br>GTAACGGTTC | AACTGTAGGG<br>TTGACATCCC | CCCCCAGGAA<br>GGGGGTCTTT |
| 2501 | GAAGGGCTGC<br>CTTCCCACG   | TGGAAGTGTG<br>ACCTTCACAC | GCAAGGAGGG<br>CGTTCCTCCC | CCACCAGATG<br>GGTGGTCTAC | AAGGACTGCA<br>TTCCTGACGT |
| 2551 | ATGAGAGGCA<br>TACTCTCCGT  | GGCCAACTTC<br>CCGGTTGAAG | CTGGGCAAAA<br>GACCCGTTTT | TCTGGCCCTC<br>AGACCGGGAG | CCACAAGGGC<br>GGTGTTCCTG |
| 2601 | AGGCCTGGCA<br>TCCGGACCGT  | ACTTCCTCCA<br>TGAAGGAGGT | GTCCAGGCCT<br>CAGGTCCGGA | GAGCCCACAG<br>CTCGGGTGTC | CCCCTCCCGA<br>GGGGAGGGCT |
| 2651 | GGAGTCCTTC<br>CCTCAGGAAG  | AGGTTTGGGG<br>TCCAAACCCC | AGGAGAAGAC<br>TCCTCTTCTG | CACCCCCAGC<br>GTGGGGGTGC | CAGAAGCAGG<br>GTCTTCGTCC |
| 2701 | AGCCCATTTGA<br>TCGGGTAACT | CAAGGAGCTG<br>GTTCTCTGAC | TACCCCCTGG<br>ATGGGGGACC | CCTCCCTGAG<br>GGAGGGACTC | GTCCCTGTTT<br>CAGGGACAAA |
| 2751 | GGCAACGACC<br>CCGTTGCTGG  | CCTCCTCCCA<br>GGAGGAGGGT | GTAAAATAAA<br>CATTTTATTT | GCCCGGGCAG<br>CGGGCCCGTC | ATCTGCTGTG<br>TAGACGACAC |
| 2801 | CCTTCTAGTT<br>GGAAGATCAA  | GCCAGCCATC<br>CGGTCGGTAG | TGTTGTTTGC<br>ACAACAAACG | CCCTCCCCCG<br>GGGAGGGGGC | TGCCTTCCTT<br>ACGGAAGGAA |
| 2851 | GACCCTGGAA<br>CTGGGACCTT  | GGTGCCACTC<br>CCACGGTGAG | CCACTGTCTT<br>GGTGACAGGA | TTCCTAATAA<br>AAGGATTATT | AATGAGGAAA<br>TTACTCCTTT |
| 2901 | TTGCATCGCA<br>AACGTAGCGT  | TTGTCTGAGT<br>AACAGACTCA | AGGTGTCATT<br>TCCACAGTAA | CTATTCTGGG<br>GATAAGACCC | GGGTGGGGTG<br>CCCACCCAC  |
| 2951 | GGGCAGGACA<br>CCCGTCCTGT  | GCAAGGGGGA<br>CGTTCCCCCT | GGATTGGGAA<br>CCTAACCCTT | GACAATAGCA<br>CTGTTATCGT | GGCATGCTGG<br>CCGTACGACC |
| 3001 | GGATGCGGTG<br>CCTACGCCAC  | GGCTCTATGG<br>CCGAGATACC | CCGATCGGCG<br>GGCTAGCCGC | CGCCGTACTG<br>GCGGCATGAC | AAATGTGTGG<br>TTTACACACC |
| 3051 | GCGTGGCTTA<br>CGCACC GAAT | AGGGTGGGAA<br>TCCCACCCTT | AGAATATATA<br>TCTTATATAT | AGGTGGGGGT<br>TCCACCCCCA | CTTATGTAGT<br>GAATACATCA |
| 3101 | TTTGTATCTG<br>AAACATAGAC  | TTTTGCAGCA<br>AAAACGTCGT | GCCGCCGCCG<br>CGGCGGCGGC | CCATGAGCAC<br>GGTACTCGTG | CAACTCGTTT<br>GTTGAGCAAA |
| 3151 | GATGGAAGCA<br>CTACCTTCGT  | TTGTGAGCTC<br>AACACTCGAG | ATATTTGACA<br>TATAAACTGT | ACGCGCATGC<br>TGCGCGTACG | CCCCATGGGC<br>GGGGTACCCG |

FIG. 10A-4

|      |                           |                          |                          |                           |                            |
|------|---------------------------|--------------------------|--------------------------|---------------------------|----------------------------|
| 3201 | CGGGGTGCGT<br>GCCCCACGCA  | CAGAATGTGA<br>GTCTTACACT | TGGGCTCCAG<br>ACCCGAGGTC | CATTGATGGT<br>GTAAC TACCA | CGCCCCGTCC<br>GCGGGGCAGG   |
| 3251 | TGCCCCGAAA<br>ACGGGCGTTT  | CTCTACTACC<br>GAGATGATGG | TTGACCTACG<br>AACTGGATGC | AGACCGTGTC<br>TCTGGCACAG  | TGGAACGCCG<br>ACCTTGCGGC   |
| 3301 | TTGGAGACTG<br>AACCTCTGAC  | CAGCCTCCGC<br>GTCGGAGGCG | CGCCGCTTCA<br>GCGGCGAAGT | GCCGCTGCAG<br>CGGCGACGTC  | CCACCGCCCCG<br>GGTGGCGGGC  |
| 3351 | CGGGATTGTG<br>GCCCTAACAC  | ACTGACTTTG<br>TGACTGAAAC | CTTTCCTGAG<br>GAAAGGACTC | CCCGCTTGCA<br>GGGCGAACGT  | AACAGTGCAG<br>TTGTCACGTC   |
| 3401 | CTTCCCGTTC<br>GAAGGGCAAG  | ATCCGCCCGC<br>TAGGCGGGCG | GATGACAAGT<br>CTACTGTTCA | TGACGGCTCT<br>ACTGCCGAGA  | TTTGGCACAA<br>AAACCGTGTT   |
| 3451 | TTGGATTCTT<br>AACCTAAGAA  | TGACCCGGGA<br>ACTGGGCCCT | ACTTAATGTC<br>TGAATTACAG | GTTTCTCAGC<br>CAAAGAGTCG  | AGCTGTTGGA<br>TCGACAACCT   |
| 3501 | TCTGCGCCAG<br>AGACGCGGTC  | CAGGTTTCTG<br>GTCCAAAGAC | CCCTGAAGGC<br>GGGACTTCCG | TTCCTCCCCT<br>AAGGAGGGGA  | CCCAATGCGG<br>GGGTACGCC    |
| 3551 | TTTAAAACAT<br>AAATTTTGTA  | AAATAAAAAA<br>TTTATTTTTT | CCAGACTCTG<br>GGTCTGAGAC | TTTGGATTTG<br>AAACCTAAAC  | GATCAAGCAA<br>CTAGTTCGTT   |
| 3601 | GTGTCTTGCT<br>CACAGAACGA  | GTCTTTATTT<br>CAGAAATAAA | AGGGGTTTTG<br>TCCCCAAAAC | CGCGCGCGGT<br>GCGCGCGCCA  | AGGCCCGGGA<br>TCCGGGCCCT   |
| 3651 | CCAGCGGTCT<br>GGTCGCCAGA  | CGGTCGTTGA<br>GCCAGCAACT | GGGTCTGTG<br>CCCAGGACAC  | TATTTTTTCC<br>ATAAAAAAGG  | AGGACGTGGT<br>TCCTGCACCA   |
| 3701 | AAAGGTGACT<br>TTTCCACTGA  | CTGGATGTTT<br>GACCTACAAG | AGATACATGG<br>TCTATGTACC | GCATAAGCCC<br>CGTATTCGGG  | GTCTCTGGGG<br>CAGAGACCCC   |
| 3751 | TGGAGGTAGC<br>ACCTCCATCG  | ACCACTGCAG<br>TGGTGACGTC | AGCTTCATGC<br>TCGAAGTACG | TGCGGGGTGG<br>ACGCCCCACC  | TGTTGTAGAT<br>ACAACATCTA   |
| 3801 | GATCCAGTCG<br>CTAGGTCAGC  | TAGCAGGAGC<br>ATCGTCCTCG | GCTGGGCGTG<br>CGACCCGCAC | GTGCCTAAAA<br>CACGGATTTT  | ATGTC TTTC A<br>TACAGAAAGT |
| 3851 | GTAGCAAGCT<br>CATCGTTCGA  | GATTGCCAGG<br>CTAACGGTCC | GGCAGGCCCT<br>CCGTCCGGGA | TGGTGTAAGT<br>ACCACATTCA  | GTTTACAAAG<br>CAAATGTTTC   |
| 3901 | CGGTTAAGCT<br>GCCAATTCTGA | GGGATGGGTG<br>CCCTACCCAC | CATACGTGGG<br>GTATGCACCC | GATATGAGAT<br>CTATACTCTA  | GCATCTTGGA<br>CGTAGAACCT   |
| 3951 | CTGTATTTTT<br>GACATAAAAA  | AGGTTGGCTA<br>TCCAACCGAT | TGTTCCCAGC<br>ACAAGGGTCG | CATATCCCTC<br>GTATAGGGAG  | CGGGGATTCA<br>GCCCCTAAGT   |

FIG. 10A-5

|      |                          |                           |                           |                           |                           |
|------|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| 4001 | TGTTGTGCAG<br>ACAACACGTC | AACCACCAGC<br>TTGGTGGTCG  | ACAGTGTATC<br>TGTCACATAG  | CGGTGCACTT<br>GCCACGTGAA  | GGGAAATTTG<br>CCCTTTAAAC  |
| 4051 | TCATGTAGCT<br>AGTACATCGA | TAGAAGGAAA<br>ATCTTCCTTT  | TGCGTGGAAG<br>ACGCACCTTC  | AACTTGGAGA<br>TTGAACCTCT  | CGCCCTTG TG<br>GCGGGAACAC |
| 4101 | ACCTCCAAGA<br>TGGAGGTTCT | TTTTCCATGC<br>AAAAGGTACG  | ATTCGTCCAT<br>TAAGCAGGTA  | AATGATGGCA<br>TTACTACCGT  | ATGGGCCCAC<br>TACCCGGGTG  |
| 4151 | GGGCGGCGGC<br>CCCGCCGCCG | CTGGGCGAAG<br>GACCCGCTTC  | ATATTTCTGG<br>TATAAAGACC  | GATCACTAAC<br>CTAGTGATTG  | GTCATAGTTG<br>CAGTATCAAC  |
| 4201 | TGTTCCAGGA<br>ACAAGGTCCT | TGAGATCGTC<br>ACTCTAGCAG  | ATAGGCCATT<br>TATCCGGTAA  | TTTACAAAGC<br>AAATGTTTCG  | GCGGGCGGAG<br>CGCCCGCCTC  |
| 4251 | GGTGCCAGAC<br>CCACGGTCTG | TGCGGTATAA<br>ACGCCATATT  | TGGTTCCATC<br>ACCAAGGTAG  | CGGCCCAGGG<br>GCCGGGTCCC  | GCGTAGTTAC<br>CGCATCAATG  |
| 4301 | CCTCACAGAT<br>GGAGTGTCTA | TTGCATTTCC<br>AACGTAAAGG  | CACGCTTTGA<br>GTGCGAAACT  | G TTCAGATGG<br>CAAGTCTACC | GGGGATCATG<br>CCCCTAGTAC  |
| 4351 | TCTACCTGCG<br>AGATGGACGC | GGGCGATGAA<br>CCCGCTACTT  | GAAAACGGTT<br>CTTTTGCCAA  | TCCGGGGTAG<br>AGGCCCCATC  | GGGAGATCAG<br>CCCTCTAGTC  |
| 4401 | CTGGGAAGAA<br>GACCCTTCTT | AGCAGGTTCC<br>TCGTCCAAGG  | TGAGCAGCTG<br>ACTCGTCGAC  | CGACTTACCG<br>GCTGAATGGC  | CAGCCGGTGG<br>GTCGGCCACC  |
| 4451 | GCCCGTAAAT<br>CGGGCATTTA | CACACCTATT<br>GTGTGGATAA  | ACCGGCTGCA<br>TGGCCGACGT  | ACTGGTAGTT<br>TGACCATCAA  | AAGAGAGCTG<br>TTCTCTCGAC  |
| 4501 | CAGCTGCCGT<br>GTCGACGGCA | CATCCCTGAG<br>GTAGGGACTC  | CAGGGGGGCC<br>GTCCCCCGG   | ACTTCGT TAA<br>TGAAGCAATT | GCATGTCCCT<br>CGTACAGGGA  |
| 4551 | GACTCGCATG<br>CTGAGCGTAC | TTTTCCCTGA<br>AAAAGGGACT  | CCAAATCCGC<br>GGTTTAGGCG  | CAGAAGGCGC<br>GTCTTCCGCG  | TCGCCGCCCA<br>AGCGGCGGGT  |
| 4601 | GCGATAGCAG<br>CGCTATCGTC | TTCTTGCAAG<br>AAGAACG TTC | GAAGCAAAGT<br>CTTCGTTTCA  | TTTTCAACGG<br>AAAAGTTGCC  | TTTGAGACCG<br>AAACTCTGGC  |
| 4651 | TCCGCCGTAG<br>AGGCGGCATC | GCATGCTTTT<br>CGTACGAAAA  | GAGCGTTTGA<br>CTCGCAA ACT | CCAAGCAGTT<br>GGTTCGTCAA  | CCAGGCGGTC<br>GGTCCGCCAG  |
| 4701 | CCACAGCTCG<br>GGTGTGAGC  | GTCACCTGCT<br>CAGTGGACGA  | CTACGGCATC<br>GATGCCGTAG  | TCGATCCAGC<br>AGCTAGGTCG  | ATATCTCCTC<br>TATAGAGGAG  |
| 4751 | GTTTCGCGGG<br>CAAAGCGCCC | TTGGGGCGGC<br>AACCCCGCCG  | TTTCGCTGTA<br>AAAGCGACAT  | CGGCAGTAGT<br>GCCGTCATCA  | CGGTGCTCGT<br>GCCACGAGCA  |

FIG. 10A-6

|      |                          |                           |                          |                          |                          |
|------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 4801 | CCAGACGGGC<br>GGTCTGCCCC | CAGGGTCATG<br>GTCCAGTAC   | TCTTTCCACG<br>AGAAAGGTGC | GGCGCAGGGT<br>CCGCGTCCCA | CCTCGTCAGC<br>GGAGCAGTCG |
| 4851 | GTAGTCTGGG<br>CATCAGACCC | TCACGGTGAA<br>AGTGCCACTT  | GGGGTGCGCT<br>CCCCACGCGA | CCGGGCTGCG<br>GGCCCGACGC | CGCTGGCCAG<br>GCGACCGGTC |
| 4901 | GGTGCGCTTG<br>CCACGCGAAC | AGGCTGGTCC<br>TCCGACCAGG  | TGCTGGTGCT<br>ACGACCACGA | GAAGCGCTGC<br>CTTCGCGACG | CGGTCTTCGC<br>GCCAGAAGCG |
| 4951 | CCTGCGCGTC<br>GGACGCGCAG | GGCCAGGTAG<br>CCGGTCCATC  | CATTTGACCA<br>GTAAACTGGT | TGGTGTGATA<br>ACCACAGTAT | GTCCAGCCCC<br>CAGGTCGGGG |
| 5001 | TCCGCGGCGT<br>AGGCGCCGCA | GGCCCTTGGC<br>CCGGAACCG   | GCGCAGCTTG<br>CGCGTCGAAC | CCCTTGAGAG<br>GGGAACCTCC | AGGCGCCGCA<br>TCCGCGGCGT |
| 5051 | CGAGGGGCAG<br>GCTCCCCGTC | TGCAGACTTT<br>ACGTCTGAAA  | TGAGGGCGTA<br>ACTCCGCGAT | GAGCTTGGGC<br>CTCGAACCCG | GCGAGAAATA<br>CGCTCTTTAT |
| 5101 | CCGATTCCGG<br>GGCTAAGGCC | GGAGTAGGCA<br>CCTCATCCGT  | TCCGCGCCGC<br>AGGCGCGGCG | AGGCCCCGCA<br>TCCGGGCGT  | GACGGTCTCG<br>CTGCCAGAGC |
| 5151 | CATTCCACGA<br>GTAAGGTGCT | GCCAGGTGAG<br>CGGTCCACTC  | CTCTGGCCGT<br>GAGACCGGCA | TCGGGGTCAA<br>AGCCCCAGTT | AAACCAGGTT<br>TTTGGTCCAA |
| 5201 | TCCCCCATGC<br>AGGGGGTACG | TTTTTGATGC<br>AAAAACTACG  | GTTTCTTACC<br>CAAAGAATGG | TCTGGTTTCC<br>AGACCAAAGG | ATGAGCCGGT<br>TACTCGGCCA |
| 5251 | GTCCACGCTC<br>CAGGTGCGAG | GGTGACGAAA<br>CCACTGCTTT  | AGGCTGTCCG<br>TCCGACAGGC | TGTCCCCGTA<br>ACAGGGGCAT | TACAGACTTG<br>ATGTCTGAAC |
| 5301 | AGAGGCCTGT<br>TCTCCGACA  | CCTCGAGCGG<br>GGAGCTCGCC  | TGTTCCGCGG<br>ACAAGGCGCC | TCCTCCTCGT<br>AGGAGGAGCA | ATAGAAACTC<br>TATCTTTGAG |
| 5351 | GGACCACTCT<br>CCTGGTGAGA | GAGACAAAGG<br>CTCTGTTTCC  | CTCGCGTCCA<br>GAGCGCAGGT | GGCCAGCACG<br>CCGGTCGTGC | AAGGAGGCTA<br>TTCTTCCGAT |
| 5401 | AGTGGGAGGG<br>TCACCCTCCC | GTAGCGGTCTG<br>CATCGCCAGC | TTGTCCACTA<br>AACAGGTGAT | GGGGGTCCAC<br>CCCCCAGGTG | TCGCTCCAGG<br>AGCGAGGTCC |
| 5451 | GTGTGAAGAC<br>CACACTTCTG | ACATGTTCGCC<br>TGTACAGCGG | CTCTTCGGCA<br>GAGAAGCCGT | TCAAGGAAGG<br>AGTTCCTTCC | TGATTGGTTT<br>ACTAACCAAA |
| 5501 | GTAGGTGTAG<br>CATCCACATC | GCCACGTGAC<br>CGGTGCACTG  | CGGGTGTTCC<br>GCCACAAGG  | TGAAGGGGGG<br>ACTTCCCCCC | CTATAAAAGG<br>GATATTTTCC |
| 5551 | GGGTGGGGGC<br>CCCACCCCCG | GCGTTCGTCC<br>CGCAAGCAGG  | TCACTCTCTT<br>AGTGAGAGAA | CCGCATCGCT<br>GGCGTAGCGA | GTCTGCGAGG<br>CAGACGCTCC |

FIG. 10A-7



|      |             |            |            |            |             |
|------|-------------|------------|------------|------------|-------------|
| 5601 | GCCAGCTGTT  | GGGGTGAGTA | CTCCCTCTGA | AAAGCGGGCA | TGACTTCTGC  |
|      | CGGTTCGACAA | CCCCACTCAT | GAGGGAGACT | TTTCGCCCCG | ACTGAAGACG  |
| 5651 | GCTAAGATTG  | TCAGTTTCCA | AAAACGAGGA | GGATTTGATA | TTCACCTGGC  |
|      | CGATTCTAAC  | AGTCAAAGGT | TTTTGCTCCT | CCTAAACTAT | AAGTGGACCG  |
| 5701 | CCGCGGTGAT  | GCCTTTGAGG | GTGGCCGCAT | CCATCTGGTC | AGAAAAGACA  |
|      | GGCGCCACTA  | CGGAAACTCC | CACCGGCGTA | GGTAGACCAG | TCTTTTCTGT  |
| 5751 | ATCTTTTTGT  | TGTCAAGCTT | GGTGGCAAAC | GACCCGTAGA | GGGCGTTGGA  |
|      | TAGAAAAACA  | ACAGTTCGAA | CCACCGTTTG | CTGGGCATCT | CCCGCAACCT  |
| 5801 | CAGCAACTTG  | GCGATGGAGC | GCAGGGTTTG | GTTTTTGTCG | CGATCGGCGC  |
|      | GTCGTTGAAC  | CGCTACCTCG | CGTCCCAAAC | CAAAAACAGC | GCTAGCCGCG  |
| 5851 | GCTCCTTGGC  | CGCGATGTTT | AGCTGCACGT | ATTCGCGCGC | AACGCACCGC  |
|      | CGAGGAACCG  | GCGCTACAAA | TCGACGTGCA | TAAGCGCGCG | TTGCGTGGCG  |
| 5901 | CATTCGGGAA  | AGACGGTGGT | GCGCTCGTCG | GGCACCAGGT | GCACGCGCCA  |
|      | GTAAGCCCTT  | TCTGCCACCA | CGCGAGCAGC | CCGTGGTCCA | CGTGC GCGGT |
| 5951 | ACCGCGGTTG  | TGCAGGGTGA | CAAGGTCAAC | GCTGGTGGCT | ACCTCTCCGC  |
|      | TGGCGCCAAC  | ACGTCCCCT  | GTTCCAGTTG | CGACCACCGA | TGGAGAGGCG  |
| 6001 | GTAGGCGCTC  | GTTGGTCCAG | CAGAGGCGGC | CGCCCTTGCG | CGAGCAGAAT  |
|      | CATCCGCGAG  | CAACCAGGTC | GTCTCCGCCG | GCGGGAACGC | GCTCGTCTTA  |
| 6051 | GGCGGTAGGG  | GGTCTAGCTG | CGTCTCGTCC | GGGGGGTCTG | CGTCCACGGT  |
|      | CCGCCATCCC  | CCAGATCGAC | GCAGAGCAGG | CCCCCAGAC  | GCAGGTGCCA  |
| 6101 | AAAGACCCCG  | GGCAGCAGGC | GCGCGTCGAA | GTAGTCTATC | TTGCATCCTT  |
|      | TTTCTGGGGC  | CCGTCGTCCG | CGCGCAGCTT | CATCAGATAG | AACGTAGGAA  |
| 6151 | GCAAGTCTAG  | CGCCTGCTGC | CATGCGCGGG | CGGCAAGCGC | GCGCTCGTAT  |
|      | CGTTCAGATC  | GCGGACGACG | GTACGCGCCC | GCCGTTCGCG | CGCGAGCATA  |
| 6201 | GGGTTGAGTG  | GGGGACCCCA | TGGCATGGGG | TGGGTGAGCG | CGGAGGCGTA  |
|      | CCCAACTCAC  | CCCCTGGGGT | ACCGTACCCC | ACCCACTCGC | GCCTCCGCAT  |
| 6251 | CATGCCGCAA  | ATGTCGTAAA | CGTAGAGGGG | CTCTCTGAGT | ATTCCAAGAT  |
|      | GTACGGCGTT  | TACAGCATT  | GCATCTCCCC | GAGAGACTCA | TAAGGTTCTA  |
| 6301 | ATGTAGGGTA  | GCATCTTCCA | CCGCGGATGC | TGGCGCGCAC | GTAATCGTAT  |
|      | TACATCCCAT  | CGTAGAAGGT | GGCGCCTACG | ACCGCGCGTG | CATTAGCATA  |
| 6351 | AGTTCGTGCG  | AGGGAGCGAG | GAGGTCGGGA | CCGAGGTTGC | TACGGGCGGG  |
|      | TCAAGCACGC  | TCCCTCGCTC | CTCCAGCCCT | GGCTCCAACG | ATGCCCGCCC  |

FIG. 10A-8

|      |                          |                          |                           |                          |                           |
|------|--------------------------|--------------------------|---------------------------|--------------------------|---------------------------|
| 6401 | CTGCTCTGCT<br>GACGAGACGA | CGGAAGACTA<br>GCCTTCTGAT | TCTGCCTGAA<br>AGACGGACTT  | GATGGCATGT<br>CTACCGTACA | GAGTTGGATG<br>CTCAACCTAC  |
| 6451 | ATATGGTTGG<br>TATACCAACC | ACGCTGGAAG<br>TGCGACCTTC | ACGTTGAAGC<br>TGCAACTTCG  | TGGCGTCTGT<br>ACCGCAGACA | GAGACCTACC<br>CTCTGGATGG  |
| 6501 | GCGTCACGCA<br>CGCAGTGCCT | CGAAGGAGGC<br>GCTTCCTCCG | GTAGGAGTCG<br>CATCCTCAGC  | CGCAGCTTGT<br>GCGTCGAACA | TGACCAGCTC<br>ACTGGTCGAG  |
| 6551 | GGCGGTGACC<br>CCGCCACTGG | TGCACGTCTA<br>ACGTGCAGAT | GGGCGCAGTA<br>CCCGCGTCAT  | GTCCAGGGTT<br>CAGGTCCCAA | TCCTTGATGA<br>AGGAACTACT  |
| 6601 | TGTCATACTT<br>ACAGTATGAA | ATCCTGTCCC<br>TAGGACAGGG | TTTTTTTTTCC<br>AAAAAAAAGG | ACAGCTCGCG<br>TGTCGAGCGC | GTTGAGGACA<br>CAACTCCTGT  |
| 6651 | AACTCTTCGC<br>TTGAGAAGCG | GGTCTTTCCA<br>CCAGAAAGGT | GTACTCTTGG<br>CATGAGAACC  | ATCGGAAACC<br>TAGCCTTTGG | CGTCGGCCTC<br>GCAGCCGGAG  |
| 6701 | CGAACGGTAA<br>GCTTGCCATT | GAGCCTAGCA<br>CTCGGATCGT | TGTAGAACTG<br>ACATCTTGAC  | GTTGACGGCC<br>CAACTGCCGG | TGGTAGGCGC<br>ACCATCCGCG  |
| 6751 | AGCATCCCTT<br>TCGTAGGGAA | TTCTACGGGT<br>AAGATGCCCA | AGCGCGTATG<br>TCGCGCATAC  | CCTGCGCGGC<br>GGACGCGCCG | CTTCCGGAGC<br>GAAGGCCTCG  |
| 6801 | GAGGTGTGGG<br>CTCCACACCC | TGAGCGCAAA<br>ACTCGCGTTT | GGTGTCCCTG<br>CCACAGGGAC  | ACCATGACTT<br>TGGTACTGAA | TGAGGTACTG<br>ACTCCATGAC  |
| 6851 | GTATTTGAAG<br>CATAAACTTC | TCAGTGTCTG<br>AGTCACAGCA | CGCATCCGCC<br>GCGTAGGCGG  | CTGCTCCCAG<br>GACGAGGGTC | AGCAAAAAGT<br>TCGTTTTTCA  |
| 6901 | CCGTGCGCTT<br>GGCACGCGAA | TTTGGAACGC<br>AAACCTTGCG | GGATTTGGCA<br>CCTAAACCGT  | GGGCGAAGGT<br>CCCGCTTCCA | GACATCGTTG<br>CTGTAGCAAC  |
| 6951 | AAGAGTATCT<br>TTCTCATAGA | TTCCCGCGCG<br>AAGGGCGCGC | AGGCATAAAG<br>TCCGTATTTT  | TTGCGTGTGA<br>AACGCACACT | TGCGGAAGGG<br>ACGCCTTCCC  |
| 7001 | TCCCGGCACC<br>AGGGCCGTGG | TCGGAACGGT<br>AGCCTTGCCA | TGTTAATTAC<br>ACAATTAATG  | CTGGGCGGCG<br>GACCCGCCGC | AGCACGATCT<br>TCGTGCTAGA  |
| 7051 | CGTCAAAGCC<br>GCAGTTTCGG | GTTGATGTTG<br>CAACTACAAC | TGGCCACAA<br>ACCGGGTGT    | TGTAAAGTTC<br>ACATTTCAAG | CAAGAAGCGC<br>GTTCTTCGCG  |
| 7101 | GGGATGCCCT<br>CCCTACGGGA | TGATGGAAGG<br>ACTACCTTCC | CAATTTTTTA<br>GTTAAAAAAT  | AGTTCCTCGT<br>TCAAGGAGCA | AGGTGAGCTC<br>TCCACTCGAG  |
| 7151 | TTCAGGGGAG<br>AAGTCCCCTC | CTGAGCCCGT<br>GACTCGGGCA | GCTCTGAAAG<br>CGAGACTTTC  | GGCCCAGTCT<br>CCGGGTCAGA | GCAAGATGAG<br>CGTTCCTACTC |

FIG. 10A-9

|      |            |            |            |             |            |
|------|------------|------------|------------|-------------|------------|
| 7201 | GGTTGGAAGC | GACGAATGAG | CTCCACAGGT | CACGGGCCAT  | TAGCATTTGC |
|      | CCAACCTTCG | CTGCTTACTC | GAGGTGTCCA | GTGCCC GGTA | ATCGTAAACG |
| 7251 | AGGTGGTCGC | GAAAGGTCCT | AAACTGGCGA | CCTATGGCCA  | TTTTTTCTGG |
|      | TCCACCAGCG | CTTTCCAGGA | TTTGACCGCT | GGATACCGGT  | AAAAAAGACC |
| 7301 | GGTGATGCAG | TAGAAGGTAA | GCGGGTCTTG | TTCCCAGCGG  | TCCCATCCAA |
|      | CCACTACGTC | ATCTTCCATT | CGCCCAGAAC | AAGGGTCGCC  | AGGGTAGGTT |
| 7351 | GGTTCGCGGC | TAGGTCTCGC | GCGGCAGTCA | CTAGAGGCTC  | ATCTCCGCCG |
|      | CCAAGCGCCG | ATCCAGAGCG | CGCCGTCAGT | GATCTCCGAG  | TAGAGGCGGC |
| 7401 | AACTTCATGA | CCAGCATGAA | GGGCACGAGC | TGCTTCCCAA  | AGGCCCCCAT |
|      | TTGAAGTACT | GGTCGTACTT | CCCGTGCTCG | ACGAAGGGTT  | TCCGGGGGTA |
| 7451 | CCAAGTATAG | GTCTCTACAT | CGTAGGTGAC | AAAGAGACGC  | TCGGTGCGAG |
|      | GGTTCATATC | CAGAGATGTA | GCATCCACTG | TTTCTCTGCG  | AGCCACGCTC |
| 7501 | GATGCGAGCC | GATCGGGAAG | AACTGGATCT | CCCGCCACCA  | ATTGGAGGAG |
|      | CTACGCTCGG | CTAGCCCTTC | TTGACCTAGA | GGGCGGTGGT  | TAACCTCCTC |
| 7551 | TGGCTATTGA | TGTGGTGAAA | GTAGAAGTCC | CTGCGACGGG  | CCGAACACTC |
|      | ACCATAACT  | ACACCACTTT | CATCTTCAGG | GACGCTGCCC  | GGCTTGTGAG |
| 7601 | GTGCTGGCTT | TTGTAAAAAC | GTGCGCAGTA | CTGGCAGCGG  | TGCACGGGCT |
|      | CACGACCGAA | AACATTTTTG | CACGCGTCAT | GACCGTCGCC  | ACGTGCCCGA |
| 7651 | GTACATCCTG | CACGAGGTTG | ACCTGACGAC | CGCGCACAAAG | GAAGCAGAGT |
|      | CATGTAGGAC | GTGCTCCAAC | TGGACTGCTG | GCGCGTGTTT  | CTTCGTCTCA |
| 7701 | GGGAATTTGA | GCCCCTCGCC | TGGCGGGTTT | GGCTGGTGGT  | CTTCTACTTC |
|      | CCCTTAAACT | CGGGGAGCGG | ACCGCCCAA  | CCGACCACCA  | GAAGATGAAG |
| 7751 | GGCTGCTTGT | CCTTGACCGT | CTGGCTGCTC | GAGGGGAGTT  | ACGGTGGATC |
|      | CCGACGAACA | GGAAGTGGCA | GACCGACGAG | CTCCCCTCAA  | TGCCACCTAG |
| 7801 | GGACCACCAC | GCCGCGCGAG | CCCAAAGTCC | AGATGTCCGC  | GCGCGGCGGT |
|      | CCTGGTGGTG | CGGCGCGCTC | GGGTTTCAGG | TCTACAGGCG  | CGCGCCGCCA |
| 7851 | CGGAGCTTGA | TGACAACATC | GCGCAGATGG | GAGCTGTCCA  | TGGTCTGGAG |
|      | GCCTCGAACT | ACTGTTGTAG | CGCGTCTACC | CTCGACAGGT  | ACCAGACCTC |
| 7901 | CTCCCGCGGC | GTCAGGTCAG | GCGGGAGCTC | CTGCAGGTTT  | ACCTCGCATA |
|      | GAGGGCGCCG | CAGTCCAGTC | CGCCCTCGAG | GACGTCCAAA  | TGGAGCGTAT |
| 7951 | GACGGGTCAG | GGCGCGGGCT | AGATCCAGGT | GATACCTAAT  | TTCCAGGGGC |
|      | CTGCCCAGTC | CCGCGCCCGA | TCTAGGTCCA | CTATGGATTA  | AAGGTCCCCG |

FIG. 10A-10

|      |                          |                          |                          |                           |                           |
|------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| 8001 | TGGTTGGTGG<br>ACCAACCACC | CGGCGTCGAT<br>GCCGCAGCTA | GGCTTGCAAG<br>CCGAACGTTT | AGGCCGCATC<br>TCCGGCGTAG  | CCCGCGGGCG<br>GGGCGCCGCG  |
| 8051 | GACTACGGTA<br>CTGATGCCAT | CCGCGCGGGC<br>GGCGCGCCGC | GGCGGTGGGC<br>CCGCCACCCG | CGCGGGGGTG<br>GCGCCCCCAC  | TCCTTGGATG<br>AGGAACCTAC  |
| 8101 | ATGCATCTAA<br>TACGTAGATT | AAGCGGTGAC<br>TTCGCCACTG | GCGGGCGAGC<br>CGCCCGCTCG | CCCCGGAGGT<br>GGGGCCTCCA  | AGGGGGGGCT<br>TCCCCCCCCG  |
| 8151 | CCGGACCCGC<br>GGCCTGGGCG | CGGGAGAGGG<br>GCCCTCTCCC | GGCAGGGGCA<br>CCGTCCCCGT | CGTCGGCGCC<br>GCAGCCGCGG  | GCGCGCGGGC<br>CGCGCGCCCG  |
| 8201 | AGGAGCTGGT<br>TCCTCGACCA | GCTGCGCGCG<br>CGACGCGCGC | TAGGTTGCTG<br>ATCCAACGAC | GCGAACGCGA<br>CGCTTGCGCT  | CGACGCGGCG<br>GCTGCGCCGC  |
| 8251 | GTTGATCTCC<br>CAACTAGAGG | TGAATCTGGC<br>ACTTAGACCG | GCCTCTGCGT<br>CGGAGACGCA | GAAGACGACG<br>CTTCTGCTGC  | GGCCCCGGTGA<br>CCGGGCCACT |
| 8301 | GCTTGAACCT<br>CGAACTTGGA | GAAAGAGAGT<br>CTTTCTCTCA | TCGACAGAAT<br>AGCTGTCTTA | CAATTTTCGGT<br>GTTAAAGCCA | GTCGTTGACG<br>CAGCAACTGC  |
| 8351 | GCGGCCTGGC<br>CGCCGGACCG | GCAAAATCTC<br>CGTTTTAGAG | CTGCACGTCT<br>GACGTGCAGA | CCTGAGTTGT<br>GGACTCAACA  | CTTGATAGGC<br>GAACTATCCG  |
| 8401 | GATCTCGGCC<br>CTAGAGCCGG | ATGAACTGCT<br>TACTTGACGA | CGATCTCTTC<br>GCTAGAGAAG | CTCCTGGAGA<br>GAGGACCTCT  | TCTCCGCGTC<br>AGAGGCGCAG  |
| 8451 | CGGCTCGCTC<br>GCCGAGCGAG | CACGGTGGCG<br>GTGCCACCGC | GCGAGGTCGT<br>CGCTCCAGCA | TGGAAATGCG<br>ACCTTTACGC  | GGCCATGAGC<br>CCGGTACTCG  |
| 8501 | TGCGAGAAGG<br>ACGCTCTTCC | CGTTGAGGCC<br>GCAACTCCGG | TCCCTCGTTC<br>AGGGAGCAAG | CAGACGCGGC<br>GTCTGCGCCG  | TGTAGACCAC<br>ACATCTGGTG  |
| 8551 | GCCCCCTTCG<br>CGGGGGAAGC | GCATCGCGGG<br>CGTAGCGCCC | CGCGCATGAC<br>GCGCGTACTG | CACCTGCGCG<br>GTGGACGCGC  | AGATTGAGCT<br>TCTAACTCGA  |
| 8601 | CCACGTGCCG<br>GGTGCACGGC | GGCGAAGACG<br>CCGCTTCTGC | GCGTAGTTTC<br>CGCATCAAAG | GCAGGCGCTG<br>CGTCCGCGAC  | AAAGAGGTTAG<br>TTTCTCCATC |
| 8651 | TTGAGGGTGG<br>AACTCCCACC | TGGCGGTGTG<br>ACCGCCACAC | TTCTGCCACG<br>AAGACGGTGC | AAGAAGTACA<br>TTCTTCATGT  | TAACCCAGCG<br>ATTGGGTGCG  |
| 8701 | TCGCAACGTG<br>AGCGTTGCAC | GATTCGTTGA<br>CTAAGCAACT | TATCCCCCAA<br>ATAGGGGGTT | GGCCTCAAGG<br>CCGGAGTTCC  | CGCTCCATGG<br>GCGAGGTACC  |
| 8751 | CCTCGTAGAA<br>GGAGCATCTT | GTCCACGGCG<br>CAGGTGCCGC | AAGTTGAAAA<br>TTCAACTTTT | ACTGGGAGTT<br>TGACCCTCAA  | GCGCGCCGAC<br>CGCGCGGCTG  |

FIG. 10A-11

|      |            |            |            |            |             |
|------|------------|------------|------------|------------|-------------|
| 8801 | ACGGTTAACT | CCTCCTCCAG | AAGACGGATG | AGCTCGGCGA | CAGTGTCGCG  |
|      | TGCCAATTGA | GGAGGAGGTC | TTCTGCCTAC | TCGAGCCGCT | GTCACAGCGC  |
| 8851 | CACCTCGCGC | TCAAAGGCTA | CAGGGGCCTC | TTCTTCTTCT | TCAATCTCCT  |
|      | GTGGAGCGCG | AGTTTCCGAT | GTCCCCGGAG | AAGAAGAAGA | AGTTAGAGGA  |
| 8901 | CTTCCATAAG | GGCCTCCCCT | TCTTCTTCTT | CTGGCGGCGG | TGGGGGAGGG  |
|      | GAAGGTATTC | CCGGAGGGGA | AGAAGAAGAA | GACCGCCGCC | ACCCCCTCCC  |
| 8951 | GGGACACGGC | GGCGACGACG | GCGCACCGGG | AGGCGGTCGA | CAAAGCGCTC  |
|      | CCCTGTGCCG | CCGCTGCTGC | CGCGTGGCCC | TCCGCCAGCT | GTTTCGCGAG  |
| 9001 | GATCATCTCC | CCGCGGCGAC | GGCGCATGGT | CTCGGTGACG | GCGCGGCCGT  |
|      | CTAGTAGAGG | GGCGCCGCTG | CCGCGTACCA | GAGCCACTGC | GCGCGCCGGCA |
| 9051 | TCTCGCGGGG | GCGCAGTTGG | AAGACGCCGC | CCGTCATGTC | CCGGTTATGG  |
|      | AGAGCGCCCC | CGCGTCAACC | TTCTGCGGCG | GGCAGTACAG | GGCCAATACC  |
| 9101 | GTTGGCGGGG | GGCTGCCATG | CGGCAGGGAT | ACGGCGCTAA | CGATGCATCT  |
|      | CAACCGCCCC | CCGACGGTAC | GCCGTCCCTA | TGCCGCGATT | GCTACGTAGA  |
| 9151 | CAACAATTGT | TGTGTAGGTA | CTCCGCCGCC | GAGGGACCTG | AGCGAGTCCG  |
|      | GTTGTTAACA | ACACATCCAT | GAGGCGGCGG | CTCCCTGGAC | TCGCTCAGGC  |
| 9201 | CATCGACCGG | ATCGGAAAAC | CTCTCGAGAA | AGGCGTCTAA | CCAGTCACAG  |
|      | GTAGCTGGCC | TAGCCTTTTG | GAGAGCTCTT | TCCGCAGATT | GGTCAGTGTC  |
| 9251 | TCGCAAGGTA | GGCTGAGCAC | CGTGGCGGGC | GGCAGCGGGC | GGCGGTCTGG  |
|      | AGCGTTCCAT | CCGACTCGTG | GCACCGCCCC | CCGTCGCCCC | CCGCCAGCCC  |
| 9301 | GTTGTTTCTG | GCGGAGGTGC | TGCTGATGAT | GTAATTAAAG | TAGGCGGTCT  |
|      | CAACAAAGAC | CGCCTCCACG | ACGACTACTA | CATTAATTTT | ATCCGCCAGA  |
| 9351 | TGAGACGGCG | GATGGTCGAC | AGAAGCACCA | TGTCCTTGGG | TCCGGCCTGC  |
|      | ACTCTGCCGC | CTACCAGCTG | TCTTCGTGGT | ACAGGAACCC | AGGCCGGACG  |
| 9401 | TGAATGCGCA | GGCGGTCGGC | CATGCCCCAG | GCTTCGTTTT | GACATCGGCG  |
|      | ACTTACGCGT | CCGCCAGCCG | GTACGGGGTC | CGAAGCAAAA | CTGTAGCCGC  |
| 9451 | CAGGTCTTTG | TAGTAGTCTT | GCATGAGCCT | TTCTACCGGC | ACTTCTTCTT  |
|      | GTCCAGAAAC | ATCATCAGAA | CGTACTCGGA | AAGATGGCCG | TGAAGAAGAA  |
| 9501 | CTCCTTCCTC | TTGTCCTGCA | TCTCTTGCA  | CTATCGCTGC | GGCGGCGGCG  |
|      | GAGGAAGGAG | AACAGGACGT | AGAGAACGTA | GATAGCGACG | CCGCCGCCGC  |
| 9551 | GAGTTTGGCC | GTAGGTGGCG | CCCTCTTCCT | CCCATGCGTG | TGACCCCGAA  |
|      | CTCAAACCGG | CATCCACCGC | GGGAGAAGGA | GGGTACGCAC | ACTGGGGCTT  |

FIG. 10A-12

|       |                          |                          |                            |                          |                          |
|-------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| 9601  | GCCCCTCATC<br>CGGGGAGTAG | GGCTGAAGCA<br>CCGACTTCGT | GGGCTAGGTC<br>CCCGATCCAG   | GGCGACAACG<br>CCGCTGTTGC | CGCTCGGCTA<br>GCGAGCCGAT |
| 9651  | ATATGGCCTG<br>TATAACGGAC | CTGCACCTGC<br>GACGTGGACG | GTGAGGGTAG<br>CACTCCCATC   | ACTGGAAGTC<br>TGACCTTCAG | ATCCATGTCC<br>TAGGTACAGG |
| 9701  | ACAAAGCGGT<br>TGTTTCGCCA | GGTATGCGCC<br>CCATACGCGG | CGTGTTGATG<br>GCACAACACTAC | GTGTAAGTGC<br>CACATTCACG | AGTTGGCCAT<br>TCAACCGGTA |
| 9751  | AACGGACCAG<br>TTGCCTGGTC | TTAACGGTCT<br>AATTGCCAGA | GGTGACCCGG<br>CCACTGGGCC   | CTGCGAGAGC<br>GACGCTCTCG | TCGGTGTACC<br>AGCCACATGG |
| 9801  | TGAGACGCGA<br>ACTCTGCGCT | GTAAGCCCTC<br>CATTCGGGAG | GAGTCAAATA<br>CTCAGTTTAT   | CGTAGTCGTT<br>GCATCAGCAA | GCAAGTCCGC<br>CGTTCAGGCG |
| 9851  | ACCAGGTACT<br>TGGTCCATGA | GGTATCCCAC<br>CCATAGGGTG | CAAAAAGTGC<br>GTTTTTCACG   | GGCGGCGGCT<br>CCGCCGCCGA | GGCGGTAGAG<br>CCGCCATCTC |
| 9901  | GGGCCAGCGT<br>CCCGGTCGCA | AGGGTGGCCG<br>TCCCACCGGC | GGGCTCCGGG<br>CCCGAGGCCC   | GGCGAGATCT<br>CCGCTCTAGA | TCCAACATAA<br>AGGTTGTATT |
| 9951  | GGCGATGATA<br>CCGCTACTAT | TCCGTAGATG<br>AGGCATCTAC | TACCTGGACA<br>ATGGACCTGT   | TCCAGGTGAT<br>AGGTCCACTA | GCCGGCGGCG<br>CGGCCGCCGC |
| 10001 | GTGGTGGAGG<br>CACCACCTCC | CGCGCGGAAA<br>GCGCGCCTTT | GTCGCGGACG<br>CAGCGCCTGC   | CGGTTCCAGA<br>GCCAAGGTCT | TGTTGCGCAG<br>ACAACGCGTC |
| 10051 | CGGCAAAAAG<br>GCCGTTTTTC | TGCTCCATGG<br>ACGAGGTACC | TCGGGACGCT<br>AGCCCTGCGA   | CTGGCCGGTC<br>GACCGGCCAG | AGGCGCGCGC<br>TCCGCGCGCG |
| 10101 | AATCGTTGAC<br>TTAGCAACTG | GCTCTAGACC<br>CGAGATCTGG | GTGCAAAAGG<br>CACGTTTTCC   | AGAGCCTGTA<br>TCTCGGACAT | AGCGGGCACT<br>TCGCCCGTGA |
| 10151 | CTTCCGTGGT<br>GAAGGCACCA | CTGGTGGATA<br>GACCACCTAT | AATTCGCAAG<br>TTAAGCGTTC   | GGTATCATGG<br>CCATAGTACC | CGGACGACCG<br>GCCTGCTGGC |
| 10201 | GGGTTCGAGC<br>CCCAAGCTCG | CCCGTATCCG<br>GGGCATAGGC | GCCGTCCGCC<br>CGGCAGGCGG   | GTGATCCATG<br>CACTAGGTAC | CGGTTACCGC<br>GCCAATGGCG |
| 10251 | CCGCGTGTCG<br>GGCGCACAGC | AACCCAGGTG<br>TTGGGTCCAC | TGCGACGTCA<br>ACGCTGCAGT   | GACAACGGGG<br>CTGTTGCCCC | GAGTGCTCCT<br>CTCACGAGGA |
| 10301 | TTTGGCTTCC<br>AAACCGAAGG | TTCCAGGCGC<br>AAGGTCCGCG | GGCGGCTGCT<br>CCGCCGACGA   | GCGCTAGCTT<br>CGCGATCGAA | TTTTGGCCAC<br>AAAACCGGTG |
| 10351 | TGGCCGCGCG<br>ACGGGCGCGC | CAGCGTAAGC<br>GTCGCATTCG | GGTTAGGCTG<br>CCAATCCGAC   | GAAAGCGAAA<br>CTTTCGCTTT | GCATTAAGTG<br>CGTAATTCAC |

FIG. 10A-13

|       |                          |                          |                          |                          |                          |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 10401 | GCTCGCTCCC<br>CGAGCGAGGG | TGTAGCCGGA<br>ACATCGGCCT | GGGTTATTTT<br>CCCAATAAAA | CCAAGGGTTG<br>GGTTCCCAAC | AGTCGCGGGA<br>TCAGCGCCCT |
| 10451 | CCCCCGGTTT<br>GGGGGCCAAG | GAGTCTCGGA<br>CTCAGAGCCT | CCGGCCGGAC<br>GGCCGGCCTG | TGCGGCGAAC<br>ACGCCGCTTG | GGGGGTTTGC<br>CCCCCAAACG |
| 10501 | CTCCCCGTCA<br>GAGGGGCAGT | TGCAAGACCC<br>ACGTTCTGGG | CGCTTGCAAA<br>GCGAACGTTT | TTCTTCCGGA<br>AAGGAGGCCT | AACAGGGACG<br>TTGTCCCTGC |
| 10551 | AGCCCCTTTT<br>TCGGGGAAAA | TTGCTTTTCC<br>AACGAAAAGG | CAGATGCATC<br>GTCTACGTAG | CGGTGCTGCG<br>GCCACGACGC | GCAGATGCGC<br>CGTCTACGCG |
| 10601 | CCCCCTCCTC<br>GGGGGAGGAG | AGCAGCGGCA<br>TCGTCGCCGT | AGAGCAAGAG<br>TCTCGTTCTC | CAGCGGCAGA<br>GTCGCCGTCT | CATGCAGGGC<br>GTACGTCCCG |
| 10651 | ACCCTCCCCT<br>TGGGAGGGGA | CCTCCTACCG<br>GGAGGATGGC | CGTCAGGAGG<br>GCAGTCCTCC | GGCGACATCC<br>CCGCTGTAGG | GCGGTTGACG<br>CGCCAACTGC |
| 10701 | CGGCAGCAGA<br>GCCGTCGTCT | TGGTGATTAC<br>ACCACTAATG | GAACCCCGC<br>CTTGGGGGCG  | GGCGCCGGGC<br>CCGCGGCCCG | CCGGCACTAC<br>GGCCGTGATG |
| 10751 | CTGGACTTGG<br>GACCTGAACC | AGGAGGGCGA<br>TCCTCCCGCT | GGGCCTGGCG<br>CCCGGACCGC | CGGCTAGGAG<br>GCCGATCCTC | CGCCCTCTCC<br>GCGGGAGAGG |
| 10801 | TGAGCGGCAC<br>ACTCGCCGTG | CCAAGGGTGC<br>GGTTCCCACG | AGCTGAAGCG<br>TCGACTTCGC | TGATACGCGT<br>ACTATGCGCA | GAGGCGTACG<br>CTCCGCATGC |
| 10851 | TGCCGCGGCA<br>ACGGCGCCGT | GAACCTGTTT<br>CTTGGAACAA | CGCGACCGCG<br>GCGCTGGCGC | AGGGAGAGGA<br>TCCCTCTCCT | GCCCGAGGAG<br>CGGGCTCCTC |
| 10901 | ATGCGGGATC<br>TACGCCCTAG | GAAAGTTCCA<br>CTTTCAAGGT | CGCAGGGCGC<br>GCGTCCCGCG | GAGCTGCGGC<br>CTCGACGCCG | ATGGCCTGAA<br>TACCGGACTT |
| 10951 | TCGCGAGCGG<br>AGCGCTCGCC | TTGCTGCGCG<br>AACGACGCGC | AGGAGGACTT<br>TCCTCCTGAA | TGAGCCCGAC<br>ACTCGGGCTG | GCGCGAACCG<br>CGCGCTTGGC |
| 11001 | GGATTAGTCC<br>CCTAATCAGG | CGCGCGCGCA<br>GCGCGCGCGT | CACGTGGCGG<br>GTGCACCGCC | CCGCCGACCT<br>GGCGGCTGGA | GGTAACCGCA<br>CCATTGGCGT |
| 11051 | TACGAGCAGA<br>ATGCTCGTCT | CGGTGAACCA<br>GCCACTTGGT | GGAGATTAAC<br>CCTCTAATTG | TTTCAAAAAA<br>AAAGTTTTTT | GCTTTAACAA<br>CGAAATTGTT |
| 11101 | CCACGTGCGT<br>GGTGACGCA  | ACGCTTGTGG<br>TGCGAACACC | CGCGCGAGGA<br>GCGCGCTCCT | GGTGGCTATA<br>CCACCGATAT | GGACTGATGC<br>CCTGACTACG |
| 11151 | ATCTGTGGGA<br>TAGACACCCT | CTTTGTAAGC<br>GAAACATTGC | GCGCTGGAGC<br>CGCGACCTCG | AAAACCCAAA<br>TTTTGGGTTT | TAGCAAGCCG<br>ATCGTTCGGC |

FIG. 10A-14

|       |            |             |            |            |            |
|-------|------------|-------------|------------|------------|------------|
| 11201 | CTCATGGCGC | AGCTGTTCCCT | TATAGTGCAG | CACAGCAGGG | ACAACGAGGC |
|       | GAGTACCGCG | TCGACAAGGA  | ATATCACGTC | GTGTCGTCCC | TGTTGCTCCG |
| 11251 | ATTCAGGGAT | GCGCTGCTAA  | ACATAGTAGA | GCCCGAGGGC | CGCTGGCTGC |
|       | TAAGTCCCTA | CGCGACGATT  | TGTATCATCT | CGGGCTCCCG | GCGACCGACG |
| 11301 | TCGATTTGAT | AAACATCCTG  | CAGAGCATAG | TGGTGCAGGA | GCGCAGCTTG |
|       | AGCTAAACTA | TTTGTAGGAC  | GTCTCGTATC | ACCACGTCCT | CGCGTCGAAC |
| 11351 | AGCCTGGCTG | ACAAGGTGGC  | CGCCATCAAC | TATTCCATGC | TTAGCCTGGG |
|       | TCGGACCGAC | TGTTCCACCG  | GCGGTAGTTG | ATAAGGTACG | AATCGGACCC |
| 11401 | CAAGTTTTAC | GCCCGCAAGA  | TATACCATAC | CCCTTACGTT | CCCATAGACA |
|       | GTTCAAAATG | CGGGCGTTCT  | ATATGGTATG | GGGAATGCAA | GGGTATCTGT |
| 11451 | AGGAGGTAAA | GATCGAGGGG  | TTCTACATGC | GCATGGCGCT | GAAGGTGCTT |
|       | TCCTCCATTT | CTAGCTCCCC  | AAGATGTACG | CGTACCGCGA | CTTCCACGAA |
| 11501 | ACCTTGAGCG | ACGACCTGGG  | CGTTTATCGC | AACGAGCGCA | TCCACAAGGC |
|       | TGGAACTCGC | TGCTGGACCC  | GCAAATAGCG | TTGCTCGCGT | AGGTGTTCCG |
| 11551 | CGTGAGCGTG | AGCCGGCGGC  | GCGAGCTCAG | CGACCGCGAG | CTGATGCACA |
|       | GCACTCGCAC | TCGGCCGCCG  | CGCTCGAGTC | GCTGGCGCTC | GACTACGTGT |
| 11601 | GCCTGCAAAG | GGCCCTGGCT  | GGCACGGGCA | GCGGCGATAG | AGAGGCCGAG |
|       | CGGACGTTTC | CCGGGACCGA  | CCGTGCCCGT | CGCCGCTATC | TCTCCGGCTC |
| 11651 | TCCTACTTTG | ACGCGGGCGC  | TGACCTGCGC | TGGGCCCCAA | GCCGACGCGC |
|       | AGGATGAAAC | TGCGCCCGCG  | ACTGGACGCG | ACCCGGGGTT | CGGCTGCGCG |
| 11701 | CCTGGAGGCA | GCTGGGGCCG  | GACCTGGGCT | GGCGGTGGCA | CCCGCGCGCG |
|       | GGACCTCCGT | CGACCCCGGC  | CTGGACCCGA | CCGCCACCGT | GGGCGCGCGC |
| 11751 | CTGGCAACGT | CGGCGGCGTG  | GAGGAATATG | ACGAGGACGA | TGAGTACGAG |
|       | GACCGTTGCA | GCCGCCGCAC  | CTCCTTATAC | TGCTCCTGCT | ACTCATGCTC |
| 11801 | CCAGAGGACG | GCGAGTACTA  | AGCGGTGATG | TTTCTGATCA | GATGATGCAA |
|       | GGTCTCCTGC | CGCTCATGAT  | TCGCCACTAC | AAAGACTAGT | CTACTACGTT |
| 11851 | GACGCAACGG | ACCCGGCGGT  | GCGGGCGGGC | CTGCAGAGCC | AGCCGTCCGG |
|       | CTGCGTTGCC | TGGGCCGCCA  | CGCCCGCCGC | GACGTCTCGG | TCGGCAGGCC |
| 11901 | CCTTAACTCC | ACGGACGACT  | GGCGCCAGGT | CATGGACCGC | ATCATGTCGC |
|       | GGAATTGAGG | TGCCTGCTGA  | CCGCGGTCCA | GTACCTGGCG | TAGTACAGCG |
| 11951 | TGACTGCGCG | CAATCCTGAC  | GCGTTCCGGC | AGCAGCCGCA | GGCCAACCGG |
|       | ACTGACGCGC | GTTAGGACTG  | CGCAAGGCCG | TCGTCGGCGT | CCGGTTGGCC |

FIG. 10A-15



|       |                           |                          |                          |                           |                          |
|-------|---------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| 12001 | CTCTCCGCAA<br>GAGAGGCGTT  | TTCTGGAAGC<br>AAGACCTTCG | GGTGGTCCCG<br>CCACCAGGGC | GCGCGCGCAA<br>CGCGCGCGTT  | ACCCACGCA<br>TGGGGTGCGT  |
| 12051 | CGAGAAGGTG<br>GCTCTTCCAC  | CTGGCGATCG<br>GACCGCTAGC | TAAACGCGCT<br>ATTTGCGCGA | GGCCGAAAAC<br>CCGGCTTTTG  | AGGGCCATCC<br>TCCCGGTAGG |
| 12101 | GGCCCGACGA<br>CCGGGCTGCT  | GGCCGGCCTG<br>CCGGCCGGAC | GTCTACGACG<br>CAGATGCTGC | CGCTGCTTCA<br>GCGACGAAGT  | GCGCGTGGCT<br>CGCGCACCGA |
| 12151 | CGTTACAACA<br>GCAATGTTGT  | GCGGCAACGT<br>CGCCGTTGCA | GCAGACCAAC<br>CGTCTGGTTG | CTGGACCGGC<br>GACCTGGCCG  | TGGTGGGGGA<br>ACCACCCCT  |
| 12201 | TGTGCGCGAG<br>ACACGCGCTC  | GCCGTGGCGC<br>CGGCACCGCG | AGCGTGAGCG<br>TCGCACTCGC | CGCGCAGCAG<br>GCGCGTCGTC  | CAGGGCAACC<br>GTCCCGTTGG |
| 12251 | TGGGCTCCAT<br>ACCCGAGGTA  | GGTTGCACTA<br>CCAACGTGAT | AACGCCTTCC<br>TTGCGGAAGG | TGAGTACACA<br>ACTCATGTGT  | GCCCGCCAAC<br>CGGGCGGTTG |
| 12301 | GTGCCGCGGG<br>CACGGCGCCC  | GACAGGAGGA<br>CTGTCCTCCT | CTACACCAAC<br>GATGTGGTTG | TTTGTGAGCG<br>AAACACTCGC  | CACTGCGGCT<br>GTGACGCCGA |
| 12351 | AATGGTGA CT<br>TTACCACTGA | GAGACACCGC<br>CTCTGTGGCG | AAAGTGAGGT<br>TTTCACTCCA | GTACCAGTCT<br>CATGGTCAGA  | GGGCCAGACT<br>CCCGGTCTGA |
| 12401 | ATTTTTTTCCA<br>TAAAAAAGGT | GACCAGTAGA<br>CTGGTCATCT | CAAGGCCTGC<br>GTTCCGGACG | AGACCGTAAA<br>TCTGGCATT T | CCTGAGCCAG<br>GGACTCGGTC |
| 12451 | GCTTTCAAAA<br>CGAAAGTTTT  | ACTTGCAAGG<br>TGAACGTCCC | GCTGTGGGGG<br>CGACACCCCC | GTGCGGGGCTC<br>CACGCCCGAG | CCACAGGCGA<br>GGTGTCCGCT |
| 12501 | CCGCGCGACC<br>GGCGCGCTGG  | GTGTCTAGCT<br>CACAGATCGA | TGCTGACGCC<br>ACGACTGCGG | CAACTCGCGC<br>GTTGAGCGCG  | CTGTTGCTGC<br>GACAACGACG |
| 12551 | TGCTAATAGC<br>ACGATTATCG  | GCCCTTCACG<br>CGGGAAGTGC | GACAGTGGCA<br>CTGTCACCGT | GCGTGTCCCG<br>CGCACAGGGC  | GGACACATAC<br>CCTGTGTATG |
| 12601 | CTAGGTCACT<br>GATCCAGTGA  | TGCTGACACT<br>ACGACTGTGA | GTACCGCGAG<br>CATGGCGCTC | GCCATAGGTC<br>CGGTATCCAG  | AGGCGCATGT<br>TCCGCGTACA |
| 12651 | GGACGAGCAT<br>CCTGCTCGTA  | ACTTTCCAGG<br>TGAAAGGTCC | AGATTACAAG<br>TCTAATGTTT | TGTCAGCCGC<br>ACAGTCGGCG  | GCGCTGGGGC<br>CGCGACCCCG |
| 12701 | AGGAGGACAC<br>TCCTCCTGTG  | GGGCAGCCTG<br>CCCGTCGGAC | GAGGCAACCC<br>CTCCGTTGGG | TAAACTACCT<br>ATTTGATGGA  | GCTGACCAAC<br>CGACTGGTTG |
| 12751 | CGGCGGCAGA<br>GCCGCCGTCT  | AGATCCCCTC<br>TCTAGGGGAG | GTTGCACAGT<br>CAACGTGTCA | TTAAACAGCG<br>AATTTGTCGC  | AGGAGGAGCG<br>TCCTCCTCGC |

FIG. 10A-16

|       |            |            |             |            |             |
|-------|------------|------------|-------------|------------|-------------|
| 12801 | CATTTTGCGC | TACGTGCAGC | AGAGCGTGAG  | CCTTAACCTG | ATGCGCGACG  |
|       | GTAAAACGCG | ATGCACGTCG | TCTCGCACTC  | GGAATTGGAC | TACGCGCTGC  |
| 12851 | GGGTAACGCC | CAGCGTGGCG | CTGGACATGA  | CCGCGCGCAA | CATGGAACCG  |
|       | CCCATTGCGG | GTCGCACCGC | GACCTGTACT  | GGCGCGCGTT | GTACCTTGGC  |
| 12901 | GGCATGTATG | CCTCAAACCG | GCCGTTTATC  | AACCGCCTAA | TGGACTACTT  |
|       | CCGTACATAC | GGAGTTTGGC | CGGCAAATAG  | TTGGCGGATT | ACCTGATGAA  |
| 12951 | GCATCGCGCG | GCCGCCGTGA | ACCCCGAGTA  | TTTCACCAAT | GCCATCTTGA  |
|       | CGTAGCGCGC | CGGCGGCACT | TGGGGCTCAT  | AAAGTGGTTA | CGGTAGAACT  |
| 13001 | ACCCGCACTG | GCTACCGCCC | CCTGGTTTCT  | ACACCGGGGG | ATTCGAGGTG  |
|       | TGGGCGTGAC | CGATGGCGGG | GGACCAAAGA  | TGTGGCCCCC | TAAGCTCCAC  |
| 13051 | CCCGAGGGTA | ACGATGGATT | CCTCTGGGAC  | GACATAGACG | ACAGCGTGTT  |
|       | GGGCTCCCAT | TGCTACCTAA | GGAGACCCTG  | CTGTATCTGC | TGTCGCACAA  |
| 13101 | TTCCCCGCAA | CCGCAGACCC | TGCTAGAGTT  | GCAACAGCGC | GAGCAGGCAG  |
|       | AAGGGGCGTT | GGCGTCTGGG | ACGATCTCAA  | CGTTGTCTCG | CTCGTCCGTC  |
| 13151 | AGGCGGCGCT | GCGAAAGGAA | AGCTTCCGCA  | GGCCAAGCAG | CTTGTCCGAT  |
|       | TCCGCCGCGA | CGCTTTCCTT | TCGAAGGCGT  | CCGGTTCGTC | GAACAGGCTA  |
| 13201 | CTAGGCGCTG | CGGCCCCGCG | GTCAGATGCT  | AGTAGCCCAT | TTCCAAGCTT  |
|       | GATCCGCGAC | GCCGGGGCGC | CAGTCTACGA  | TCATCGGGTA | AAGGTTTCGAA |
| 13251 | GATAGGGTCT | CTTACCAGCA | CTCGCACCAAC | CCGCCCCGCG | CTGCTGGGCG  |
|       | CTATCCCAGA | GAATGGTCGT | GAGCGTGGTG  | GGCGGGCGCG | GACGACCCGC  |
| 13301 | AGGAGGAGTA | CCTAAACAAC | TCGCTGCTGC  | AGCCGCAGCG | CGAAAAAAC   |
|       | TCCTCCTCAT | GGATTTGTTG | AGCGACGACG  | TCGGCGTCGC | GCTTTTTTTG  |
| 13351 | CTGCCTCCGG | CATTTCCCAA | CAACGGGATA  | GAGAGCCTAG | TGGACAAGAT  |
|       | GACGGAGGCC | GTAAAGGGTT | GTTGCCCTAT  | CTCTCGGATC | ACCTGTTCTA  |
| 13401 | GAGTAGATGG | AAGACGTACG | CGCAGGAGCA  | CAGGGACGTG | CCAGGCCCGC  |
|       | CTCATCTACC | TTCTGCATGC | GCGTCCTCGT  | GTCCCTGCAC | GGTCCGGGCG  |
| 13451 | GCCCGCCAC  | CCGTCTGTC  | AGGCACGACC  | GTCAGCGGGG | TCTGGTGTGG  |
|       | CGGGCGGGTG | GGCAGCAGTT | TCCGTGCTGG  | CAGTCGCCCC | AGACCACACC  |
| 13501 | GAGGACGATG | ACTCGGCAGA | CGACAGCAGC  | GTCCTGGATT | TGGGAGGGAG  |
|       | CTCCTGCTAC | TGAGCCGTCT | GCTGTCGTCG  | CAGGACCTAA | ACCCTCCCTC  |
| 13551 | TGGCAACCCG | TTTGCGCACC | TTCGCCCCAG  | GCTGGGGAGA | ATGTTTTTAA  |
|       | ACCGTTGGGC | AAACGCGTGG | AAGCGGGGTC  | CGACCCCTCT | TACAAAATTT  |

FIG. 10A-17

|       |                           |                          |                          |                          |                          |
|-------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 13601 | AAAAAAAAAA<br>TTTTTTTTTT  | GCATGATGCA<br>CGTACTACGT | AAATAAAAAA<br>TTTATTTTTT | CTCACCAAGG<br>GAGTGGTTCC | CCATGGCACC<br>GGTACCGTGG |
| 13651 | GAGCGTTGGT<br>CTCGCAACCA  | TTTCTTGTAT<br>AAAGAACATA | TCCCCTTAGT<br>AGGGGAATCA | ATGCGGCGCG<br>TACGCCGCGC | CGGCGATGTA<br>GCCGCTACAT |
| 13701 | TGAGGAAGGT<br>ACTCCTTCCA  | CCTCCTCCCT<br>GGAGGAGGGA | CCTACGAGAG<br>GGATGCTCTC | TGTGGTGAGC<br>ACACCACTCG | GCGGCGCCAG<br>CGCCGCGGTC |
| 13751 | TGGCGGCGGC<br>ACCGCCGCCG  | GCTGGGTTCT<br>CGACCCAAGA | CCCTTCGATG<br>GGGAAGCTAC | CTCCCCTGGA<br>GAGGGGACCT | CCCGCCGTTT<br>GGGCGGCAAA |
| 13801 | GTGCCTCCGC<br>CACGGAGGCG  | GGTACCTGCG<br>CCATGGACGC | GCCTACCGGG<br>CGGATGGCCC | GGGAGAAACA<br>CCCTCTTTGT | GCATCCGTTA<br>CGTAGGCAAT |
| 13851 | CTCTGAGTTG<br>GAGACTCAAC  | GCACCCCTAT<br>CGTGGGGATA | TCGACACCAC<br>AGCTGTGGTG | CCGTGTGTAC<br>GGCACACATG | CTGGTGGACA<br>GACCACCTGT |
| 13901 | ACAAGTCAAC<br>TGTTCAAGTTG | GGATGTGGCA<br>CCTACACCGT | TCCCTGAACT<br>AGGGACTTGA | ACCAGAACGA<br>TGGTCTTGCT | CCACAGCAAC<br>GGTGTGCTTG |
| 13951 | TTTCTGACCA<br>AAAGACTGGT  | CGGTCATTCA<br>GCCAGTAAGT | AAACAATGAC<br>TTTGTTACTG | TACAGCCCGG<br>ATGTCGGGCC | GGGAGGCAAG<br>CCCTCCGTTT |
| 14001 | CACACAGACC<br>GTGTGTCTGG  | ATCAATCTTG<br>TAGTTAGAAC | ACGACCGGTC<br>TGCTGGCCAG | GCACTGGGGC<br>CGTGACCCCG | GGCGACCTGA<br>CCGCTGGACT |
| 14051 | AAACCATCCT<br>TTTGGTAGGA  | GCATACCAAC<br>CGTATGGTTG | ATGCCAAATG<br>TACGGTTTAC | TGAACGAGTT<br>ACTTGCTCAA | CATGTTTACC<br>GTACAAATGG |
| 14101 | AATAAGTTTA<br>TTATTCAAAT  | AGGCGCGGGT<br>TCCGCGCCCA | GATGGTGTCG<br>CTACCACAGC | CGCTTGCCTA<br>GCGAACGGAT | CTAAGGACAA<br>GATTCTGTG  |
| 14151 | TCAGGTGGAG<br>AGTCCACCTC  | CTGAAATACG<br>GACTTTATGC | AGTGGGTGGA<br>TCACCCACCT | GTTTACGCTG<br>CAAGTGCGAC | CCCGAGGGCA<br>GGGCTCCCGT |
| 14201 | ACTACTCCGA<br>TGATGAGGCT  | GACCATGACC<br>CTGGTACTGG | ATAGACCTTA<br>TATCTGGAAT | TGAACAACGC<br>ACTTGTTGCG | GATCGTGGAG<br>CTAGCACCTC |
| 14251 | CACTACTTGA<br>GTGATGAACT  | AAGTGGGCAG<br>TTCACCCGTC | ACAGAACGGG<br>TGTCTTGCCC | GTTCTGGAAA<br>CAAGACCTTT | GCGACATCGG<br>CGCTGTAGCC |
| 14301 | GGTAAAGTTT<br>CCATTTCAA   | GACACCCGCA<br>CTGTGGGCGT | ACTTCAGACT<br>TGAAGTCTGA | GGGGTTTGAC<br>CCCCAACTG  | CCCGTCACTG<br>GGGCAGTGAC |
| 14351 | GTCTTGTCAT<br>CAGAACAGTA  | GCCTGGGGTA<br>CGGACCCCAT | TATACAAACG<br>ATATGTTTGC | AAGCCTTCCA<br>TTCGGAAGGT | TCCAGACATC<br>AGGTCTGTAG |

FIG. 10A-18

|       |            |             |            |            |            |
|-------|------------|-------------|------------|------------|------------|
| 14401 | ATTTTGCTGC | CAGGATGCGG  | GGTGGACTTC | ACCCACAGCC | GCCTGAGCAA |
|       | TAAAACGACG | GTCCTACGCC  | CCACCTGAAG | TGGGTGTCGG | CGGACTCGTT |
| 14451 | CTTGTTGGGC | ATCCGCAAGC  | GGCAACCCTT | CCAGGAGGGC | TTTAGGATCA |
|       | GAACAACCCG | TAGGCGTTTCG | CCGTTGGGAA | GGTCCTCCCG | AAATCCTAGT |
| 14501 | CCTACGATGA | TCTGGAGGGT  | GGTAACATTC | CCGCACTGTT | GGATGTGGAC |
|       | GGATGCTACT | AGACCTCCCA  | CCATTGTAAG | GGCGTGACAA | CCTACACCTG |
| 14551 | GCCTACCAGG | CGAGCTTGAA  | AGATGACACC | GAACAGGGCG | GGGGTGGCGC |
|       | CGGATGGTCC | GCTCGAACTT  | TCTACTGTGG | CTTGTCCCGC | CCCCACCGCG |
| 14601 | AGGCGGCAGC | AACAGCAGTG  | GCAGCGGCGC | GGAAGAGAAC | TCCAACGCGG |
|       | TCCGCCGTCG | TTGTCGTCAC  | CGTCGCCGCG | CCTTCTCTTG | AGGTTGCGCC |
| 14651 | CAGCCGCGGC | AATGCAGCCG  | GTGGAGGACA | TGAACGATCA | TGCCATTTCG |
|       | GTCGGCGCCG | TTACGTCGGC  | CACCTCCTGT | ACTTGCTAGT | ACGGTAAGCG |
| 14701 | GGCGACACCT | TTGCCACACG  | GGCTGAGGAG | AAGCGCGCTG | AGGCCGAAGC |
|       | CCGCTGTGGA | AACGGTGTGC  | CCGACTCCTC | TTCGCGCGAC | TCCGGCTTCG |
| 14751 | AGCGGCCGAA | GCTGCCGCCC  | CCGCTGCGCA | ACCCGAGGTC | GAGAAGCCTC |
|       | TCGCCGGCTT | CGACGGCGGG  | GGCGACGCGT | TGGGCTCCAG | CTCTTCGGAG |
| 14801 | AGAAGAAACC | GGTGATCAAA  | CCCCTGACAG | AGGACAGCAA | GAAACGCAGT |
|       | TCTTCTTTGG | CCACTAGTTT  | GGGGACTGTC | TCCTGTCGTT | CTTTGCGTCA |
| 14851 | TACAACTTAA | TAAGCAATGA  | CAGCACCTTC | ACCCAGTACC | GCAGCTGGTA |
|       | ATGTTGGATT | ATTGTTACT   | GTCGTGGAAG | TGGGTCATGG | CGTCGACCAT |
| 14901 | CCTTGCATAC | AACTACGGCG  | ACCCTCAGAC | CGGAATCCGC | TCATGGACCC |
|       | GGAACGTATG | TTGATGCCGC  | TGGGAGTCTG | GCCTTAGGCG | AGTACCTGGG |
| 14951 | TGCTTTGCAC | TCCTGACGTA  | ACCTGCGGCT | CGGAGCAGGT | CTACTGGTCG |
|       | ACGAAACGTG | AGGACTGCAT  | TGGACGCCGA | GCCTCGTCCA | GATGACCAGC |
| 15001 | TTGCCAGACA | TGATGCAAGA  | CCCCGTGACC | TTCCGCTCCA | CGCGCCAGAT |
|       | AACGGTCTGT | ACTACGTTCT  | GGGGCACTGG | AAGGCGAGGT | GCGCGGTCTA |
| 15051 | CAGCAACTTT | CCGGTGGTGG  | GCGCCGAGCT | GTTGCCCGTG | CACTCCAAGA |
|       | GTCGTTGAAA | GGCCACCACC  | CGCGGCTCGA | CAACGGGCAC | GTGAGGTTCT |
| 15101 | GCTTCTACAA | CGACCAGGCC  | GTCTACTCCC | AACTCATCCG | CCAGTTTACC |
|       | CGAAGATGTT | GCTGGTCCGG  | CAGATGAGGG | TTGAGTAGGC | GGTCAAATGG |
| 15151 | TCTCTGACCC | ACGTGTTCAA  | TCGCTTTCCC | GAGAACCAGA | TTTTGGCGCG |
|       | AGAGACTGGG | TGCACAAGTT  | AGCGAAAGGG | CTCTTGGTCT | AAAACCGCGC |

FIG. 10A-19

|       |                           |                          |                          |                           |                          |
|-------|---------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| 15201 | CCCGCCAGCC<br>GGGCGGTCGG  | CCCACCATCA<br>GGGTGGTAGT | CCACCGTCAG<br>GGTGGCAGTC | TGAAAACGTT<br>ACTTTTGCAA  | CCTGCTCTCA<br>GGACGAGAGT |
| 15251 | CAGATCACGG<br>GTCTAGTGCC  | GACGCTACCG<br>CTGCGATGGC | CTGCGCAACA<br>GACGCGTTGT | GCATCGGAGG<br>CGTAGCCTCC  | AGTCCAGCGA<br>TCAGGTCGCT |
| 15301 | GTGACCATTA<br>CACTGGTAAT  | CTGACGCCAG<br>GACTGCGGTC | ACGCCGCACC<br>TGCGGCGTGG | TGCCCCCTACG<br>ACGGGGATGC | TTTACAAGGC<br>AAATGTTCCG |
| 15351 | CCTGGGCATA<br>GGACCCGTAT  | GTCTCGCCGC<br>CAGAGCGGCG | GCGTCCTATC<br>CGCAGGATAG | GAGCCGCACT<br>CTCGGCGTGA  | TTTTGAGCAA<br>AAAACTCGTT |
| 15401 | GCATGTCCAT<br>CGTACAGGTA  | CCTTATATCG<br>GGAATATAGC | CCCAGCAATA<br>GGGTCGTTAT | ACACAGGCTG<br>TGTGTCCGAC  | GGGCCTGCGC<br>CCCGGACGCG |
| 15451 | TTCCCAAGCA<br>AAGGGTTCGT  | AGATGTTTGG<br>TCTACAAACC | CGGGGCCAAG<br>GCCCGGTTTC | AAGCGCTCCG<br>TTCGCGAGGC  | ACCAACACCC<br>TGGTTGTGGG |
| 15501 | AGTGCGCGTG<br>TCACGCGCAC  | CGCGGGCACT<br>GCGCCCGTGA | ACCGCGCGCC<br>TGGCGCGCGG | CTGGGGCGCG<br>GACCCCGCGC  | CACAAACGCG<br>GTGTTTGCGC |
| 15551 | GCCGCACTGG<br>CGGCGTGACC  | GCGCACCACC<br>CGCGTGGTGG | GTCGATGACG<br>CAGCTACTGC | CCATCGACGC<br>GGTAGCTGCG  | GGTGGTGGAG<br>CCACCACCTC |
| 15601 | GAGGCGCGCA<br>CTCCGCGCGT  | ACTACACGCC<br>TGATGTGCGG | CACGCCGCCA<br>GTGCGGCGGT | CCAGTGTCCA<br>GGTCACAGGT  | CAGTGGACGC<br>GTCACCTGCG |
| 15651 | GGCCATT CAG<br>CCGGTAAGTC | ACCGTGGTGC<br>TGGCACCACG | GCGGAGCCCG<br>CGCCTCGGGC | GCGCTATGCT<br>CGCGATACGA  | AAAATGAAGA<br>TTTTACTTCT |
| 15701 | GACGGCGGAG<br>CTGCCGCCTC  | GCGCGTAGCA<br>CGCGCATCGT | CGTCGCCACC<br>GCAGCGGTGG | GCCGCCGACC<br>CGGCGGCTGG  | CGGCACTGCC<br>GCCGTGACGG |
| 15751 | GCCCAACGCG<br>CGGGTTGCGC  | CGGCGGCGGC<br>GCCGCCGCCG | CCTGCTTAAC<br>GGACGAATTG | CGCGCACGTC<br>GCGCGTG CAG | GCACCGGCCG<br>CGTGGCCGGC |
| 15801 | ACGGGCGGCC<br>TGCCCGCCGG  | ATGCGGGCCG<br>TACGCCCGGC | CTCGAAGGCT<br>GAGCTTCCGA | GGCCGCGGGT<br>CCGGCGCCCA  | ATTGTCACTG<br>TAACAGTGAC |
| 15851 | TGCCCCC CAG<br>ACGGGGGGTC | GTCCAGGCGA<br>CAGGTCCGCT | CGAGCGGCCG<br>GCTCGCCGGC | CCGCAGCAGC<br>GGCGTCGTCTG | CGCGGCCATT<br>GCGCCGGTAA |
| 15901 | AGTGCTATGA<br>TCACGATACT  | CTCAGGGTCG<br>GAGTCCCAGC | CAGGGGCAAC<br>GTCCCCGTTG | GTGTATTGGG<br>CACATAACCC  | TGCGCGACTC<br>ACGCGCTGAG |
| 15951 | GGTTAGCGGC<br>CCAATCGCCG  | CTGCGCGTGC<br>GACGCGCACG | CCGTGCGCAC<br>GGCACGCGTG | CCGCCCCCGG<br>GGCGGGGGGC  | CGCAACTAGA<br>GCGTTGATCT |

FIG. 10A-20

|       |                           |                           |                          |                          |                          |
|-------|---------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 16001 | TTGCAAGAAA<br>AACGTTCTTT  | AAACTACTTA<br>TTTGATGAAT  | GACTCGTACT<br>CTGAGCATGA | GTTGTATGTA<br>CAACATACAT | TCCAGCGGCG<br>AGGTCGCCGC |
| 16051 | GCGGCGCGCA<br>CGCCGCGCGT  | ACGAAGCTAT<br>TGCTTCGATA  | GTCCAAGCGC<br>CAGGTTTCGC | AAAATCAAAG<br>TTTTAGTTTC | AAGAGATGCT<br>TTCTCTACGA |
| 16101 | CCAGGTCATC<br>GGTCCAGTAG  | GCGCCGGAGA<br>CGCGGCCTCT  | TCTATGGCCC<br>AGATACCGGG | CCCGAAGAAG<br>GGGCTTCTTC | GAAGAGCAGG<br>CTTCTCGTCC |
| 16151 | ATTACAAGCC<br>TAATGTTTCGG | CCGAAAGCTA<br>GGCTTTTCGAT | AAGCGGGTCA<br>TTCGCCCAGT | AAAAGAAAAA<br>TTTTCTTTTT | GAAAGATGAT<br>CTTTCTACTA |
| 16201 | GATGATGAAC<br>CTACTACTTG  | TTGACGACGA<br>AACTGCTGCT  | GGTGGAACTG<br>CCACCTTGAC | CTGCACGCTA<br>GACGTGCGAT | CCGCGCCCAG<br>GGCGCGGGTC |
| 16251 | GCGACGGGTA<br>CGCTGCCCAT  | CAGTGGAAAG<br>GTCACCTTTC  | GTCGACGCGT<br>CAGCTGCGCA | AAAACGTGTT<br>TTTTGCACAA | TTGCGACCCG<br>AACGCTGGGC |
| 16301 | GCACCACCGT<br>CGTGGTGGCA  | AGTCTTTTACG<br>TCAGAAATGC | CCCGGTGAGC<br>GGGCCACTCG | GCTCCACCCG<br>CGAGGTGGGC | CACCTACAAG<br>GTGGATGTTT |
| 16351 | CGCGTGTATG<br>GCGCACATAC  | ATGAGGTGTA<br>TACTCCACAT  | CGGCGACGAG<br>GCCGCTGCTC | GACCTGCTTG<br>CTGGACGAAC | AGCAGGCCAA<br>TCGTCCGGTT |
| 16401 | CGAGCGCCTC<br>GCTCGCGGAG  | GGGGAGTTTG<br>CCCCTCAAAC  | CCTACGGAAA<br>GGATGCCTTT | GCGGCATAAG<br>CGCCGTATTC | GACATGCTGG<br>CTGTACGACC |
| 16451 | CGTTGCCGCT<br>GCAACGGCGA  | GGACGAGGGC<br>CCTGCTCCCC  | AACCCAACAC<br>TTGGGTGTG  | CTAGCCTAAA<br>GATCGGATTT | GCCCGTAACA<br>CGGGCATTGT |
| 16501 | CTGCAGCAGG<br>GACGTCGTCC  | TGCTGCCCCG<br>ACGACGGGCG  | GCTTGCACCG<br>CGAACGTGGC | TCCGAAGAAA<br>AGGCTTCTTT | AGCGCGGCCT<br>TCGCGCCGGA |
| 16551 | AAAGCGCGAG<br>TTTCGCGCTC  | TCTGGTGACT<br>AGACCACTGA  | TGGCACCCAC<br>ACCGTGGGTG | CGTGCAGCTG<br>GCACGTCGAC | ATGGTACCCA<br>TACCATGGGT |
| 16601 | AGCGCCAGCG<br>TCGCGGTCGC  | ACTGGAAGAT<br>TGACCTTCTA  | GTCTTGGA<br>CAGAACCTTT   | AAATGACCGT<br>TTTACTGGCA | GGAACCTGGG<br>CCTTGGACCC |
| 16651 | CTGGAGCCCG<br>GACCTCGGGC  | AGGTCCGCGT<br>TCCAGGCGCA  | GCGGCCAATC<br>CGCCGGTTAG | AAGCAGGTGG<br>TTCGTCCACC | CGCCGGGACT<br>GCGGCCCTGA |
| 16701 | GGGCGTGCAG<br>CCCGCACGTC  | ACCGTGGACG<br>TGGCACCTGC  | TTCAGATACC<br>AAGTCTATGG | CACTACCAGT<br>GTGATGGTCA | AGCACCAGTA<br>TCGTGGTCAT |
| 16751 | TTGCCACCGC<br>AACGGTGGCG  | CACAGAGGGC<br>GTGTCTCCCC  | ATGGAGACAC<br>TACCTCTGTG | AAACGTCCCC<br>TTTGCAGGGG | GGTTGCCTCA<br>CCAACGGAGT |

FIG. 10A-21

|       |            |             |            |            |            |
|-------|------------|-------------|------------|------------|------------|
| 16801 | GCGGTGGCGG | ATGCCGCGGT  | GCAGGCGGTC | GCTGCGGCCG | CGTCCAAGAC |
|       | CGCCACCGCC | TACGGCGCCA  | CGTCCGCCAG | CGACGCCGGC | GCAGGTTCTG |
| 16851 | CTCTACGGAG | GTGCAAACGG  | ACCCGTGGAT | GTTTCGCGTT | TCAGCCCCCC |
|       | GAGATGCCTC | CACGTTTGCC  | TGGGCACCTA | CAAAGCGCAA | AGTCGGGGGG |
| 16901 | GGCGCCCGCG | CCGTTCGAGG  | AAGTACGGCG | CCGCCAGCGC | GCTACTGCCC |
|       | CCGCGGGCGC | GGCAAGCTCC  | TTCATGCCGC | GGCGGTCGCG | CGATGACGGG |
| 16951 | GAATATGCCC | TACATCCTTC  | CATTGCGCCT | ACCCCCGGCT | ATCGTGGCTA |
|       | CTTATACGGG | ATGTAGGAAG  | GTAACGCGGA | TGGGGGCCGA | TAGCACCGAT |
| 17001 | CACCTACCGC | CCCAGAAGAC  | GAGCAACTAC | CCGACGCCGA | ACCACCACTG |
|       | GTGGATGGCG | GGGTCTTCTG  | CTCGTTGATG | GGCTGCGGCT | TGGTGGTGAC |
| 17051 | GAACCCGCCG | CCGCCGTCGC  | CGTCGCCAGC | CCGTGCTGGC | CCCATTTCCT |
|       | CTTGGGCGGC | GGCGGCAGCG  | GCAGCGGTCG | GGCACGACCG | GGGCTAAAGG |
| 17101 | GTGCGCAGGG | TGGCTCGCGA  | AGGAGGCAGG | ACCCTGGTGC | TGCCAACAGC |
|       | CACGCGTCCC | ACCGAGCGCT  | TCCTCCGTCC | TGGGACCACG | ACGGTTGTCT |
| 17151 | GCGCTACCAC | CCCAGCATCG  | TTTAAAAGCC | GGTCTTTGTG | GTTCTTGCAG |
|       | CGCGATGGTG | GGGTCGTAGC  | AAATTTTCGG | CCAGAAACAC | CAAGAACGTC |
| 17201 | ATATGGCCCT | CACCTGCCGC  | CTCCGTTTCC | CGGTGCCGGG | ATTCCGAGGA |
|       | TATACCGGGA | GTGGACGGCG  | GAGGCAAAGG | GCCACGGCCC | TAAGGCTCCT |
| 17251 | AGAATGCACC | GTAGGAGGGG  | CATGGCCGGC | CACGGCCTGA | CGGGCGGCAT |
|       | TCTTACGTGG | CATCCTCCCC  | GTACCGGCCG | GTGCCGGAAT | GCCCGCCGTA |
| 17301 | GCGTCGTGCG | CACCACCGGC  | GGCGGCGCGC | GTCGCACCGT | CGCATGCGCG |
|       | CGCAGCACGC | GTGGTGGCCG  | CCGCCGCGCG | CAGCGTGGCA | GCGTACGCGC |
| 17351 | GCGGTATCCT | GCCCCTCCTT  | ATTCCACTGA | TCGCCGCGGC | GATTGGCGCC |
|       | CGCCATAGGA | CGGGGAGGAA  | TAAGGTGACT | AGCGGCGCCG | CTAACCGCGG |
| 17401 | GTGCCCCGAA | TTGCATCCGT  | GGCCTTGCAG | GCGCAGAGAC | ACTGATTAAA |
|       | CACGGGCCTT | AACGTAGGCA  | CCGGAACGTC | CGCGTCTCTG | TGACTAATTT |
| 17451 | AACAAGTTGC | ATGTGGAAAA  | ATCAAAATAA | AAAGTCTGGA | CTCTCACGCT |
|       | TTGTTCAACG | TACACCTTTT  | TAGTTTTATT | TTTCAGACCT | GAGAGTGCGA |
| 17501 | CGCTTGGTCC | TGTAACCTATT | TTGTAGAATG | GAAGACATCA | ACTTTGCGTC |
|       | GCGAACCAGG | ACATTGATAA  | AACATCTTAC | CTTCTGTAGT | TGAAACGCAG |
| 17551 | TCTGGCCCCG | CGACACGGCT  | CGCGCCCGTT | CATGGGAAAC | TGGCAAGATA |
|       | AGACCGGGGC | GCTGTGCCGA  | GCGCGGGCAA | GTACCCTTTG | ACCGTTCTAT |

FIG. 10A-22

|       |                          |                           |                          |                          |                           |
|-------|--------------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| 17601 | TCGGCACCAG<br>AGCCGTGGTC | CAATATGAGC<br>GTTATACTCG  | GGTGGCGCCT<br>CCACCGCGGA | TCAGCTGGGG<br>AGTCGACCCC | CTCGCTGTGG<br>GAGCGACACC  |
| 17651 | AGCGGCATTA<br>TCGCCGTAAT | AAAATTTTCGG<br>TTTTAAAGCC | TTCCACCGTT<br>AAGGTGGCAA | AAGAACTATG<br>TTCTTGATAC | GCAGCAAGGC<br>CGTCGTTCGG  |
| 17701 | CTGGAACAGC<br>GACCTTGTCG | AGCACAGGCC<br>TCGTGTCCGG  | AGATGCTGAG<br>TCTACGACTC | GGATAAGTTG<br>CCTATTCAAC | AAAGAGCAAA<br>TTTCTCGTTT  |
| 17751 | ATTTCCAACA<br>TAAAGGTTGT | AAAGGTGGTA<br>TTTCCACCAT  | GATGGCCTGG<br>CTACCGGACC | CCTCTGGCAT<br>GGAGACCGTA | TAGCGGGGTG<br>ATCGCCCCAC  |
| 17801 | GTGGACCTGG<br>CACCTGGACC | CCAACCAGGC<br>GGTTGGTCCG  | AGTGCAAAAT<br>TCACGTTTTA | AAGATTAACA<br>TTCTAATTGT | GTAAGCTTGA<br>CATTCGAACT  |
| 17851 | TCCCCGCCCT<br>AGGGGCGGGA | CCCGTAGAGG<br>GGGCATCTCC  | AGCCTCCACC<br>TCGGAGGTGG | GGCCGTGGAG<br>CCGGCACCTC | ACAGTGTCTC<br>TGTCACAGAG  |
| 17901 | CAGAGGGGCG<br>GTCTCCCCGC | TGGCGAAAAG<br>ACCGCTTTTC  | CGTCCGCGCC<br>GCAGGCGCGG | CCGACAGGGA<br>GGCTGTCCCT | AGAAACTCTG<br>TCTTTGAGAC  |
| 17951 | GTGACGCAAA<br>CACTGCGTTT | TAGACGAGCC<br>ATCTGCTCGG  | TCCCTCGTAC<br>AGGGAGCATG | GAGGAGGCAC<br>CTCCTCCGTG | TAAAGCAAGG<br>ATTTTCGTTCC |
| 18001 | CCTGCCCACC<br>GGACGGGTGG | ACCCGTCCCA<br>TGGGCAGGGT  | TCGCGCCCAT<br>AGCGCGGGTA | GGCTACCGGA<br>CCGATGGCCT | GTGCTGGGCC<br>CACGACCCGG  |
| 18051 | AGCACACACC<br>TCGTGTGTGG | CGTAACGCTG<br>GCATTGCGAC  | GACCTGCCTC<br>CTGGACGGAG | CCCCCGCCGA<br>GGGGGCGGCT | CACCCAGCAG<br>GTGGGTCTGC  |
| 18101 | AAACCTGTGC<br>TTTGGACACG | TGCCAGGCCC<br>ACGGTCCGGG  | GACCGCCGTT<br>CTGGCGGCAA | GTTGTAACCC<br>CAACATTGGG | GTCCTAGCCG<br>CAGGATCGGC  |
| 18151 | CGCGTCCCTG<br>GCGCAGGGAC | CGCCGCGCCG<br>GCGGCGCGGC  | CCAGCGGTCC<br>GGTCGCCAGG | GCGATCGTTG<br>CGCTAGCAAC | CGGCCCGTAG<br>GCCGGGCATC  |
| 18201 | CCAGTGCGAA<br>GGTCACCGTT | CTGGCAAAGC<br>GACCGTTTCG  | ACACTGAACA<br>TGTGACTTGT | GCATCGTGGG<br>CGTAGCACCC | TCTGGGGGTG<br>AGACCCCCAC  |
| 18251 | CAATCCCTGA<br>GTTAGGGACT | AGCGCCGACG<br>TCGCGGCTGC  | ATGCTTCTGA<br>TACGAAGACT | TAGCTAACGT<br>ATCGATTGCA | GTCGTATGTG<br>CAGCATAAC   |
| 18301 | TGTCATGTAT<br>ACAGTACATA | GCGTCCATGT<br>CGCAGGTACA  | CGCCGCCAGA<br>GCGGCGGTCT | GGAGCTGCTG<br>CCTCGACGAC | AGCCGCCGCG<br>TCGGCGGCGC  |
| 18351 | CGCCCGCTTT<br>GCGGGCGAAA | CCAAGATGGC<br>GGTTCTACCG  | TACCCCTTCG<br>ATGGGGAAGC | ATGATGCCGC<br>TACTACGGCG | AGTGGTCTTA<br>TCACCAGAAT  |

FIG. 10A-23



|       |                           |                          |                           |                          |                           |
|-------|---------------------------|--------------------------|---------------------------|--------------------------|---------------------------|
| 18401 | CATGCACATC<br>GTACGTGTAG  | TCGGGCCAGG<br>AGCCCGGTCC | ACGCCTCGGA<br>TGCGGAGCCT  | GTACCTGAGC<br>CATGGACTCG | CCCGGGCTGG<br>GGGCCCAGACC |
| 18451 | TGCAGTTTGC<br>ACGTCAAACG  | CCGCGCCACC<br>GGCGCGGTGG | GAGACGTACT<br>CTCTGCATGA  | TCAGCCTGAA<br>AGTCGGACTT | TAACAAGTTT<br>ATTGTTCAAA  |
| 18501 | AGAAACCCCA<br>TCTTTGGGGT  | CGGTGGCGCC<br>GCCACGCGG  | TACGCACGAC<br>ATGCGTGCTG  | GTGACCACAG<br>CACTGGTGTC | ACCGGTCCCA<br>TGGCCAGGGT  |
| 18551 | GCGTTTGACG<br>CGCAAAC TGC | CTGCGGTTCA<br>GACGCCAAGT | TCCCTGTGGA<br>AGGGACACCT  | CCGTGAGGAT<br>GGCACTCCTA | ACTGCGTACT<br>TGACGCATGA  |
| 18601 | CGTACAAGGC<br>GCATGTTCCG  | GCGGTTTACC<br>CGCCAAGTGG | CTAGCTGTGG<br>GATCGACACC  | GTGATAACCG<br>CACTATTGGC | TGTGCTGGAC<br>ACACGACCTG  |
| 18651 | ATGGCTTCCA<br>TACCGAAGGT  | CGTACTTTGA<br>GCATGAAACT | CATCCGCGGC<br>GTAGGCGCCG  | GTGCTGGACA<br>CACGACCTGT | GGGGCCCTAC<br>CCCCGGGATG  |
| 18701 | TTTTAAGCCC<br>AAAATTCGGG  | TACTCTGGCA<br>ATGAGACCGT | CTGCCTACAA<br>GACGGATGTT  | CGCCCTGGCT<br>GCGGGACCGA | CCCAAGGGTG<br>GGGTTCCAC   |
| 18751 | CCCCAAATCC<br>GGGGTTTAGG  | TTGCGAATGG<br>AACGCTTACC | GATGAAGCTG<br>CTACTTCGAC  | CTACTGCTCT<br>GATGACGAGA | TGAAATAAAC<br>ACTTTATTTG  |
| 18801 | CTAGAAGAAG<br>GATCTTCTTC  | AGGACGATGA<br>TCCTGCTACT | CAACGAAGAC<br>GTTGCTTCTG  | GAAGTAGACG<br>CTTCATCTGC | AGCAAGCTGA<br>TCGTTCGACT  |
| 18851 | GCAGCAAAAA<br>CGTCGTTTTT  | ACTCACGTAT<br>TGAGTGCATA | TTGGGCAGGC<br>AACCCGTCCG  | GCCTTATTCT<br>CGGAATAAGA | GGTATAAATA<br>CCATATTTAT  |
| 18901 | TTACAAAGGA<br>AATGTTTCCT  | GGGTATTCAA<br>CCCATAAGTT | ATAGGTGTCTG<br>TATCCACAGC | AAGGTCAAAC<br>TTCCAGTTTG | ACCTAAATAT<br>TGGATTTATA  |
| 18951 | GCCGATAAAA<br>CGGCTATTTT  | CATTTCAACC<br>GTAAAGTTGG | TGAACCTCAA<br>ACTTGAGATT  | ATAGGAGAAT<br>TATCCTCTTA | CTCAGTGGTA<br>GAGTCACCAT  |
| 19001 | CGAAACAGAA<br>GCTTTGTCTT  | ATTAATCATG<br>TAATTAGTAC | CAGCTGGGAG<br>GTCGACCCTC  | AGTCCTAAAA<br>TCAGGATTTT | AAGACTACCC<br>TTCTGATGGG  |
| 19051 | CAATGAAACC<br>GTTACTTTGG  | ATGTTACGGT<br>TACAATGCCA | TCATATGCAA<br>AGTATACGTT  | AACCCACAAA<br>TTGGGTGTTT | TGAAAATGGA<br>ACTTTTACCT  |
| 19101 | GGGCAAGGCA<br>CCCGTTCCGT  | TTCTTGTAAG<br>AAGAACATTT | GCAACAAAAAT<br>CGTTGTTTTA | GGAAAGCTAG<br>CCTTTCGATC | AAAGTCAAGT<br>TTTCAGTTCA  |
| 19151 | GGAAATGCAA<br>CCTTTACGTT  | TTTTTCTCAA<br>AAAAAGAGTT | CTACTGAGGC<br>GATGACTCCG  | AGCCGCAGGC<br>TCGGCGTCCG | AATGGTGATA<br>TTACCACTAT  |

FIG. 10A-24

|       |             |             |            |             |             |
|-------|-------------|-------------|------------|-------------|-------------|
| 19201 | ACTTGACTCC  | TAAAGTGGTA  | TTGTACAGTG | AAGATGTAGA  | TATAGAAACC  |
|       | TGAACTGAGG  | ATTCACCAT   | AACATGTCAC | TTCTACATCT  | ATATCTTTGG  |
| 19251 | CCAGACACTC  | ATATTTCTTA  | CATGCCCACT | ATTAAGGAAG  | GTAAC TCACG |
|       | GGTCTGTGAG  | TATAAAGAAT  | GTACGGGTGA | TAATTCCTTC  | CATTGAGTGC  |
| 19301 | AGAACTAATG  | GGCCAACAAT  | CTATGCCCAA | CAGGCCTAAT  | TACATTGCTT  |
|       | TCTTGATTAC  | CCGGTTGTTA  | GATACGGGTT | GTCCGGATTA  | ATGTAACGAA  |
| 19351 | TTAGGGACAA  | TTTTATTGGT  | CTAATGTATT | ACAACAGCAC  | GGGTAATATG  |
|       | AATCCCTGTT  | AAAATAACCA  | GATTACATAA | TGTTGTCTGT  | CCCATTATAC  |
| 19401 | GGTGTCTCTG  | CGGGCCAAGC  | ATCGCAGTTG | AATGCTGTTG  | TAGATTTGCA  |
|       | CCACAAGACC  | GCCCGGTTCT  | TAGCGTCAAC | TTACGACAAC  | ATCTAAACGT  |
| 19451 | AGACAGAAAC  | ACAGAGCTTT  | CATACCAGCT | TTTGCTTGAT  | TCCATTGGTG  |
|       | TCTGTCTTTG  | TGTCTCGAAA  | GTATGGTCGA | AAACGAAC TA | AGGTAACCAC  |
| 19501 | ATAGAACCAG  | GTACTTTTCT  | ATGTGGAATC | AGGCTGTTGA  | CAGCTATGAT  |
|       | TATCTTGGTC  | CATGAAAAGA  | TACACCTTAG | TCCGACAAC T | GTCGATACTA  |
| 19551 | CCAGATGTTA  | GAATTATTGA  | AAATCATGGA | ACTGAAGATG  | AACTTCCAAA  |
|       | GGTCTACAAT  | CTTAATAACT  | TTTAGTACCT | TGACTTCTAC  | TTGAAGGTTT  |
| 19601 | TTACTGCTTT  | CCACTGGGAG  | GTGTGATTAA | TACAGAGACT  | CTTACCAAGG  |
|       | AATGACGAAA  | GGTGACCCTC  | CACACTAATT | ATGTCTCTGA  | GAATGGTTCC  |
| 19651 | TAAACCTAA   | AACAGGTCAG  | GAAAATGGAT | GGGAAAAAGA  | TGCTACAGAA  |
|       | ATTTTGGATT  | TTGTCCAGTC  | CTTTTACCTA | CCCTTTTTTCT | ACGATGTCTT  |
| 19701 | TTTTTCAGATA | AAAATGAAAT  | AAGAGTTGGA | AATAATTTTG  | CCATGGAAAT  |
|       | AAAAGTCTAT  | TTTTACTTTA  | TTCTCAACCT | TTATTAAAAC  | GGTACCTTTA  |
| 19751 | CAATCTAAAT  | GCCAACCTGT  | GGAGAAATTT | CCTGTACTCC  | AACATAGCGC  |
|       | GTTAGATTTA  | CGGTTGGACA  | CCTCTTTAAA | GGACATGAGG  | TTGTATCGCG  |
| 19801 | TGTATTTGCC  | CGACAAGCTA  | AAGTACAGTC | CTTCCAACGT  | AAAAATTTCT  |
|       | ACATAAACGG  | GCTGTTTCGAT | TTCATGTCAG | GAAGGTTGCA  | TTTTTAAAGA  |
| 19851 | GATAACCCAA  | ACACCTACGA  | CTACATGAAC | AAGCGAGTGG  | TGGCTCCCGG  |
|       | CTATTGGGTT  | TGTGGATGCT  | GATGTACTTG | TTGCTCACC   | ACCGAGGGCC  |
| 19901 | GCTAGTGGAC  | TGCTACATTA  | ACCTTGGAGC | ACGCTGGTCC  | CTTGACTATA  |
|       | CGATCACCTG  | ACGATGTAAT  | TGGAACCTCG | TGCGACCAGG  | GAAGTATAT   |
| 19951 | TGGACAACGT  | CAACCCATTT  | AACCACCACC | GCAATGCTGG  | CCTGCGCTAC  |
|       | ACCTGTTGCA  | GTTGGGTAAA  | TTGGTGGTGG | CGTTACGACC  | GGACGCGATG  |

FIG. 10A-25

|       |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|
| 20001 | CGCTCAATGT  | TGCTGGGCAA  | TGGTCGCTAT  | GTGCCCTTCC  | ACATCCAGGT  |
|       | GCGAGTTACA  | ACGACCCGTT  | ACCAGCGATA  | CACGGGAAGG  | TGTAGGTCCA  |
| 20051 | GCCTCAGAAG  | TTCTTTGCCA  | TTAAAAACCT  | CCTTCTCCTG  | CCGGGCTCAT  |
|       | CGGAGTCTTC  | AAGAAACGGT  | AATTTTGGGA  | GGAAGAGGAC  | GGCCCGAGTA  |
| 20101 | ACACCTACGA  | GTGGAAC TTC | AGGAAGGATG  | TTAACATGGT  | TCTGCAGAGC  |
|       | TGTGGATGCT  | CACCTTGAAG  | TCCTTCCTAC  | AATTGTACCA  | AGACGTCTCG  |
| 20151 | TCCCTAGGAA  | ATGACCTAAG  | GGTTGACGGA  | GCCAGCATTA  | AGTTTGATAG  |
|       | AGGGATCCTT  | TACTGGATTC  | CCAAC TGCCT | CGGTCGTAAT  | TCAAAC TATC |
| 20201 | CATTTGCCTT  | TACGCCACCT  | TCTTCCCCAT  | GGCCCACAAC  | ACCGCCTCCA  |
|       | GTAAACGGAA  | ATGCGGTGGA  | AGAAGGGGTA  | CCGGGTGTTG  | TGGCGGAGGT  |
| 20251 | CGCTTGAGGC  | CATGCTTAGA  | AACGACACCA  | ACGACCAGTC  | CTTTAACGAC  |
|       | GCGAACTCCG  | GTACGAATCT  | TTGCTGTGGT  | TGCTGGTCAG  | GAAATTGCTG  |
| 20301 | TATCTCTCCG  | CCGCCAACAT  | GCTCTACCCT  | ATACCCGCCA  | ACGCTACCAA  |
|       | ATAGAGAGGC  | GGCGGTGTGA  | CGAGATGGGA  | TATGGGCGGT  | TGCGATGGTT  |
| 20351 | CGTGCCCAT   | TCCATCCCCT  | CCCGCAACTG  | GGCGGCTTTC  | CGCGGCTGGG  |
|       | GCACGGGTAT  | AGGTAGGGGA  | GGGCGTTGAC  | CCGCCGAAAG  | GCGCCGACCC  |
| 20401 | CCTTCACGCG  | CCTTAAGACT  | AAGGAAACCC  | CATCACTGGG  | CTCGGGCTAC  |
|       | GGAAGTGCGC  | GGAATTCTGA  | TTCCTTTGGG  | GTAGTGACCC  | GAGCCCGATG  |
| 20451 | GACCC TTATT | ACACCTACTC  | TGGCTCTATA  | CCCTACCTAG  | ATGGAACCTT  |
|       | CTGGGAATAA  | TGTGGATGAG  | ACCGAGATAT  | GGGATGGATC  | TACCTTGGA   |
| 20501 | TTACCTCAAC  | CACACCTTTA  | AGAAGGTGGC  | CATTACCTTT  | GACTCTTCTG  |
|       | AATGGAGTTG  | GTGTGGAAAT  | TCTTCCACCG  | GTAATGGAAA  | CTGAGAAGAC  |
| 20551 | TCAGCTGGCC  | TGGCAATGAC  | CGCCTGCTTA  | CCCCAACGA   | GTTTGAAATT  |
|       | AGTCGACCGG  | ACCGTTACTG  | GCGGACGAAT  | GGGGGTGCT   | CAAAC TTTAA |
| 20601 | AAGCGCTCAG  | TTGACGGGGA  | GGGTTACAAC  | GTTGCCCAGT  | GTAACATGAC  |
|       | TTGCGGAGTC  | AACTGCCCT   | CCCAATGTTG  | CAACGGGTCA  | CATTGTACTG  |
| 20651 | CAAAGACTGG  | TTCCTGGTAC  | AAATGCTAGC  | TAAC TATAAC | ATTGGCTACC  |
|       | GTTTCTGACC  | AAGGACCATG  | TTTACGATCG  | ATTGATATTG  | TAACCGATGG  |
| 20701 | AGGGCTTCTA  | TATCCAGAG   | AGCTACAAGG  | ACCGCATGTA  | CTCCTTCTTT  |
|       | TCCCGAAGAT  | ATAGGGTCTC  | TCGATGTTCC  | TGGCGTACAT  | GAGGAAGAAA  |
| 20751 | AGAAACTTCC  | AGCCCATGAG  | CCGTCAGGTG  | GTGGATGATA  | CTAAATACAA  |
|       | TCTTTGAAGG  | TCGGGTACTC  | GGCAGTCCAC  | CACCTACTAT  | GATTTATGTT  |

FIG. 10A-26

|       |            |             |             |            |            |
|-------|------------|-------------|-------------|------------|------------|
| 20801 | GGACTACCAA | CAGGTGGGCA  | TCCTACACCA  | ACACAACAAC | TCTGGATTTG |
|       | CCTGATGGTT | GTCCACCCGT  | AGGATGTGGT  | TGTGTTGTTG | AGACCTAAAC |
| 20851 | TTGGCTACCT | TGCCCCCACC  | ATGCGCGAAG  | GACAGGCCTA | CCCTGCTAAC |
|       | AACCGATGGA | ACGGGGGTGG  | TACGCGCTTC  | CTGTCCGGAT | GGGACGATTG |
| 20901 | TTCCCCTATC | CGCTTATAGG  | CAAGACCGCA  | GTTGACAGCA | TTACCCAGAA |
|       | AAGGGGATAG | GCGAATATCC  | GTTCTGGCGT  | CAACTGTTCG | AATGGGTCTT |
| 20951 | AAAGTTTCTT | TGCGATCGCA  | CCCTTTGGCG  | CATCCCATTG | TCCAGTAACT |
|       | TTTCAAAGAA | ACGCTAGCGT  | GGGAAACCGC  | GTAGGGTAAG | AGGTCATTGA |
| 21001 | TTATGTCCAT | GGGCGCACTC  | ACAGACCTGG  | GCCAAAACCT | TCTCTACGCC |
|       | AATACAGGTA | CCCGCGTGAG  | TGTCTGGACC  | CGGTTTTTGA | AGAGATGCGG |
| 21051 | AACTCCGCCC | ACGCGCTAGA  | CATGACTTTT  | GAGGTGGATC | CCATGGACGA |
|       | TTGAGGCGGG | TGCGCGATCT  | GTA CTGAAAA | CTCCACCTAG | GGTACCTGCT |
| 21101 | GCCCACCCTT | CTTTATGTTT  | TGTTTGAAGT  | CTTTGACGTG | GTCCGTGTGC |
|       | CGGGTGGGAA | GAAATACAAA  | ACAAACTTCA  | GAAACTGCAC | CAGGCACACG |
| 21151 | ACCAGCCGCA | CCGCGGCGTC  | ATCGAAACCG  | TGTACCTGCG | CACGCCCTTC |
|       | TGGTCGGCGT | GGCGCCGCAG  | TAGCTTTGGC  | ACATGGACGC | GTGCGGGAAG |
| 21201 | TCGGCCGGCA | ACGCCACAAC  | ATAAAGAAGC  | AAGCAACATC | AACAACAGCT |
|       | AGCCGGCCGT | TGCGGTGTTG  | TATTTCTTCG  | TTCGTTGTAG | TTGTTGTCGA |
| 21251 | GCCGCCATGG | GCTCCAGTGA  | GCAGGAACTG  | AAAGCCATTG | TCAAAGATCT |
|       | CGGCGGTACC | CGAGGTCACT  | CGTCCTTGAC  | TTTCGGTAAC | AGTTTCTAGA |
| 21301 | TGGTTGTGGG | CCATATTTTT  | TGGGCACCTA  | TGACAAGCGC | TTTCCAGGCT |
|       | ACCAACACCC | GGTATAAAAA  | ACCCGTGGAT  | ACTGTTCGCG | AAAGGTCCGA |
| 21351 | TTGTTTCTCC | ACACAAGCTC  | GCCTGCGCCA  | TAGTCAATAC | GGCCGGTCGC |
|       | AACAAAGAGG | TGTGTTTCGAG | CGGACGCGGT  | ATCAGTTATG | CCGGCCAGCG |
| 21401 | GAGACTGGGG | GCGTACACTG  | GATGGCCTTT  | GCCTGGAACC | CGCACTCAAA |
|       | CTCTGACCCC | CGCATGTGAC  | CTACCGGAAA  | CGGACCTTGG | GCGTGAGTTT |
| 21451 | AACATGCTAC | CTCTTTGAGC  | CCTTTGGCTT  | TTCTGACCAG | CGACTCAAGC |
|       | TTGTACGATG | GAGAAACTCG  | GGAAACCGAA  | AAGACTGGTC | GCTGAGTTCT |
| 21501 | AGGTTTACCA | GTTTGAGTAC  | GAGTCACTCC  | TGCGCCGTAG | CGCCATTGCT |
|       | TCCAAATGGT | CAAAC TCATG | CTCAGTGAGG  | ACGCGGCATC | GCGGTAACGA |
| 21551 | TCTTCCCCCG | ACCGCTGTAT  | AACGCTGGAA  | AAGTCCACCC | AAAGCGTACA |
|       | AGAAGGGGGC | TGGCGACATA  | TTGCGACCTT  | TTCAGGTGGG | TTTCGCATGT |

FIG. 10A-27

|       |                           |                           |                          |                          |                          |
|-------|---------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 21601 | GGGGCCCAAC<br>CCCCGGGTTG  | TCGGCCGCCT<br>AGCCGGCGGA  | GTGGACTATT<br>CACCTGATAA | CTGCTGCATG<br>GACGACGTAC | TTTCTCCACG<br>AAAGAGGTGC |
| 21651 | CCTTTGCCAA<br>GGAAACGGTT  | CTGGCCCCAA<br>GACCGGGGTT  | ACTCCCATGG<br>TGAGGGTACC | ATCACAACCC<br>TAGTGTTGGG | CACCATGAAC<br>GTGGTACTTG |
| 21701 | CTTATTACCG<br>GAATAATGGC  | GGGTACCCAA<br>CCCATGGGTT  | CTCCATGCTC<br>GAGGTACGAG | AACAGTCCCC<br>TTGTCAGGGG | AGGTACAGCC<br>TCCATGTCGG |
| 21751 | CACCCTGCGT<br>GTGGGACGCA  | CGCAACCAGG<br>GCGTTGGTCC  | AACAGCTCTA<br>TTGTCGAGAT | CAGCTTCCTG<br>GTCGAAGGAC | GAGCGCCACT<br>CTCGCGGTGA |
| 21801 | CGCCCTACTT<br>GCGGGATGAA  | CCGCAGCCAC<br>GGCGTCGGTG  | AGTGCGCAGA<br>TCACGCGTCT | TTAGGAGCGC<br>AATCCTCGCG | CACTTCTTTT<br>GTGAAGAAAA |
| 21851 | TGTCACTTGA<br>ACAGTGAAC   | AAAACATGTA<br>TTTTGTACAT  | AAAATAATGT<br>TTTTATTACA | ACTAGAGACA<br>TGATCTCTGT | CTTTCAATAA<br>GAAAGTTATT |
| 21901 | AGGCAAATGC<br>TCCGTTTACG  | TTTTATTTGT<br>AAAATAAACA  | AACTCTCGG<br>TGTGAGAGCC  | GTGATTATTT<br>CACTAATAAA | ACCCCCACCC<br>TGGGGGTGGG |
| 21951 | TTGCCGTCTG<br>AACGGCAGAC  | CGCCGTTTAA<br>GCGGCAAATT  | AAATCAAAGG<br>TTTAGTTTCC | GGTCTGCGG<br>CCAAGACGGC  | CGCATCGCTA<br>GCGTAGCGAT |
| 22001 | TGCGCCACTG<br>ACGCGGTGAC  | GCAGGGACAC<br>CGTCCCTGTG  | GTTGCGATAC<br>CAACGCTATG | TGGTGTTTAG<br>ACCACAAATC | TGCTCCACTT<br>ACGAGGTGAA |
| 22051 | AAACTCAGGC<br>TTTGAGTCCG  | ACAACCATCC<br>TGTTGGTAGG  | GCGGCAGCTC<br>CGCCGTCGAG | GGTGAAGTTT<br>CCACTTCAA  | TCACTCCACA<br>AGTGAGGTGT |
| 22101 | GGCTGCGCAC<br>CCGACGCGTG  | CATCACCAAC<br>GTAGTGGTTG  | GCGTTTAGCA<br>CGCAAATCGT | GGTCGGGCGC<br>CCAGCCCGCG | CGATATCTTG<br>GCTATAGAAC |
| 22151 | AAGTCGCAGT<br>TTCAGCGTCA  | TGGGGCCTCC<br>ACCCCGGAGG  | GCCCTGCGCG<br>CGGGACGCGC | CGCGAGTTGC<br>GCGCTCAACG | GATACACAGG<br>CTATGTGTCC |
| 22201 | GTTGCAGCAC<br>CAACGTCGTG  | TGGAACACTA<br>ACCTTGTTGAT | TCAGCGCCGG<br>AGTCGCGGCC | GTGGTGCACG<br>CACCACGTGC | CTGGCCAGCA<br>GACCGGTGCT |
| 22251 | CGCTCTTGTC<br>GCGAGAACAG  | GGAGATCAGA<br>CCTCTAGTCT  | TCCGCGTCCA<br>AGGCGCAGGT | GGTCCTCCGC<br>CCAGGAGGCG | GTTGCTCAGG<br>CAACGAGTCC |
| 22301 | GCGAACGGAG<br>CGCTTGCCCTC | TCAACTTTGG<br>AGTTGAAACC  | TAGCTGCCTT<br>ATCGACGGAA | CCCAAAAAGG<br>GGGTTTTTCC | GCGCGTGCCC<br>CGCGCACGGG |
| 22351 | AGGCTTTGAG<br>TCCGAAACTC  | TTGCACTCGC<br>AACGTGAGCG  | ACCGTAGTGG<br>TGGCATCACC | CATCAAAGG<br>GTAGTTTTCC  | TGACCGTGCC<br>ACTGGCACGG |

FIG. 10A-28

|       |             |             |            |            |             |
|-------|-------------|-------------|------------|------------|-------------|
| 22401 | CGGTCTGGGC  | GTTAGGATAC  | AGCGCCTGCA | TAAAAGCCTT | GATCTGCTTA  |
|       | GCCAGACCCG  | CAATCCTATG  | TCGCGGACGT | ATTTTCGGAA | CTAGACGAAT  |
| 22451 | AAAGCCACCT  | GAGCCTTTGC  | GCCTTCAGAG | AAGAACATGC | CGCAAGACTT  |
|       | TTTCGGTGGA  | CTCGGAAACG  | CGGAAGTCTC | TTCTTGACG  | GCGTTCTGAA  |
| 22501 | GCCGGAAAAC  | TGATTGGCCG  | GACAGGCCGC | GTCGTGCACG | CAGCACCTTG  |
|       | CGGCCTTTTG  | ACTAACC GGC | CTGTCCGGCG | CAGCACGTGC | GTCGTGGAAC  |
| 22551 | CGTCGGTGTT  | GGAGATCTGC  | ACCACATTTT | GGCCCCACCG | GTTCTTCACG  |
|       | GCAGCCACAA  | CCTCTAGACG  | TGGTGTAAG  | CCGGGGTGGC | CAAGAAGTGC  |
| 22601 | ATCTTGGCCT  | TGCTAGACTG  | CTCCTTCAGC | GCGCGCTGCC | CGTTTTTCGCT |
|       | TAGAACCGGA  | ACGATCTGAC  | GAGGAAGTCG | CGCGCGACGG | GCAAAAGCGA  |
| 22651 | CGTCACATCC  | ATTTCAATCA  | CGTGCTCCTT | ATTTATCATA | ATGCTTCCGT  |
|       | GCAGTG TAGG | TAAAGTTAGT  | GCACGAGGAA | TAAATAGTAT | TACGAAGGCA  |
| 22701 | GTAGACACTT  | AAGCTCGCCT  | TCGATCTCAG | CGCAGCGGTG | CAGCCACAAC  |
|       | CATCTGTGAA  | TTCGAGCGGA  | AGCTAGAGTC | GCGTCGCCAC | GTCGGTGTTG  |
| 22751 | GCGCAGCCCG  | TGGGCTCGTG  | ATGCTTGTAG | GTCACCTCTG | CAAACGACTG  |
|       | CGCGTCGGGC  | ACCCGAGCAC  | TACGAACATC | CAGTGGAGAC | GTTTGCTGAC  |
| 22801 | CAGGTACGCC  | TGCAGGAATC  | GCCCCATCAT | CGTCACAAAG | GTCTTGTTGC  |
|       | GTCCATGCGG  | ACGTCCTTAG  | CGGGGTAGTA | GCAGTGTTTC | CAGAACAACG  |
| 22851 | TGGTGAAGGT  | CAGCTGCAAC  | CCGCGGTGCT | CCTCGTTCAG | CCAGGTCTTG  |
|       | ACCACTTCCA  | GTCGACGTTG  | GGCGCCACGA | GGAGCAAGTC | GGTCCAGAAC  |
| 22901 | CATACGGCCG  | CCAGAGCTTC  | CACTTGGTCA | GGCAGTAGTT | TGAAGTTCGC  |
|       | GTATGCCGGC  | GGTCTCGAAG  | GTGAACCAGT | CCGTCATCAA | ACTTCAAGCG  |
| 22951 | CTTTAGATCG  | TTATCCACGT  | GGTACTTGTC | CATCAGCGCG | CGCGCAGCCT  |
|       | GAAATCTAGC  | AATAGGTGCA  | CCATGAACAG | GTAGTCGCGC | GCGCGTCGGA  |
| 23001 | CCATGCCCTT  | CTCCCACGCA  | GACACGATCG | GCACACTCAG | CGGGTTCATC  |
|       | GGTACGGGAA  | GAGGGTGCGT  | CTGTGCTAGC | CGTGTGAGTC | GCCCAAGTAG  |
| 23051 | ACCGTAATTT  | CACTTTCCGC  | TTCGCTGGGC | TCTTCCTCTT | CCTCTTGCGT  |
|       | TGGCATTAAT  | GTGAAAGGCG  | AAGCGACCCG | AGAAGGAGAA | GGAGAACGCA  |
| 23101 | CCGCATACCA  | CGCGCCACTG  | GGTCGTCTTC | ATTCAGCCGC | CGCACTGTGC  |
|       | GGCGTATGGT  | GCGCGGTGAC  | CCAGCAGAAG | TAAGTCGGCG | GCGTGACACG  |
| 23151 | GCTTACCTCC  | TTTGCCATGC  | TTGATTAGCA | CCGGTGGGTT | GCTGAAACCC  |
|       | CGAATGGAGG  | AAACGGTACG  | AACTAATCGT | GGCCACCCAA | CGACTTTGGG  |

FIG. 10A-29

|       |                           |                           |                            |                          |                           |
|-------|---------------------------|---------------------------|----------------------------|--------------------------|---------------------------|
| 23201 | ACCATTTGTA<br>TGGTAAACAT  | GCGCCACATC<br>CGCGGTGTAG  | TTCTCTTTCT<br>AAGAGAAAGA   | TCCTCGCTGT<br>AGGAGCGACA | CCACGATTAC<br>GGTGCTAATG  |
| 23251 | CTCTGGTGAT<br>GAGACCACTA  | GGCGGGCGCT<br>CCGCCCCGCGA | CGGGCTTGGG<br>GCCCCGAACCC  | AGAAGGGCGC<br>TCTTCCCGCG | TTCTTTTTTCT<br>AAGAAAAAGA |
| 23301 | TCTTGGGCGC<br>AGAACCCGCG  | AATGGCCAAA<br>TTACCGGTTT  | TCCGCCGCCG<br>AGGCGGCGGC   | AGGTCGATGG<br>TCCAGCTACC | CCGCGGGCTG<br>GGCGCCCGAC  |
| 23351 | GGTGTGCGCG<br>CCACACGCGC  | GCACCAGCGC<br>CGTGGTTCGCG | GTCTTGATGAT<br>CAGAACTACTA | GAGTCTTCCT<br>CTCAGAAGGA | CGTCCTCGGA<br>GCAGGAGCCT  |
| 23401 | CTCGATACGC<br>GAGCTATGCG  | CGCCTCATCC<br>GCGGAGTAGG  | GCTTTTTTTGG<br>CGAAAAAACC  | GGGCGCCCGG<br>CCCGCGGGCC | GGAGGCGGCG<br>CCTCCGCCGC  |
| 23451 | GCGACGGGGA<br>CGCTGCCCCCT | CGGGGACGAC<br>GCCCTGCTG   | ACGTCCTCCA<br>TGCAGGAGGT   | TGGTTGGGGG<br>ACCAACCCCC | ACGTCGCGCC<br>TGCAGCGCGG  |
| 23501 | GCACCGCGTC<br>CGTGGCGCAG  | CGCGCTCGGG<br>GCGCGAGCCC  | GGTGGTTTCG<br>CCACCAAAGC   | CGCTGCTCCT<br>GCGACGAGGA | CTTCCCGACT<br>GAAGGGCTGA  |
| 23551 | GGCCATTTCC<br>CCGGTAAAGG  | TTCTCCTATA<br>AAGAGGATAT  | GGCAGAAAAA<br>CCGTCTTTTT   | GATCATGGAG<br>CTAGTACCTC | TCAGTCGAGA<br>AGTCAGCTCT  |
| 23601 | AGAAGGACAG<br>TCTTCCTGTC  | CCTAACCGCC<br>GGATTGGCGG  | CCCTCTGAGT<br>GGGAGACTCA   | TCGCCACCAC<br>AGCGGTGGTG | CGCCTCCACC<br>GCGGAGGTGG  |
| 23651 | GATGCCGCCA<br>CTACGGCGGT  | ACGCGCCTAC<br>TGCGCGGATG  | CACCTTCCCC<br>GTGGAAGGGG   | GTCGAGGCAC<br>CAGCTCCGTG | CCCCGCTTGA<br>GGGGCGAACT  |
| 23701 | GGAGGAGGAA<br>CCTCCTCCTT  | GTGATTATCG<br>CACTAATAGC  | AGCAGGACCC<br>TCGTCTGGG    | AGGTTTTGTA<br>TCCAAAACAT | AGCGAAGACG<br>TCGCTTCTGC  |
| 23751 | ACGAGGACCG<br>TGCTCCTGGC  | CTCAGTACCA<br>GAGTCATGGT  | ACAGAGGATA<br>TGTCTCCTAT   | AAAAGCAAGA<br>TTTTCGTTCT | CCAGGACAAC<br>GGTCCTGTTG  |
| 23801 | GCAGAGGCAA<br>CGTCTCCGTT  | ACGAGGAACA<br>TGCTCCTTGT  | AGTCGGGCGG<br>TCAGCCCGCC   | GGGGACGAAA<br>CCCCTGCTTT | GGCATGGCGA<br>CCGTACCGCT  |
| 23851 | CTACCTAGAT<br>GATGGATCTA  | GTGGGAGACG<br>CACCCTCTGC  | ACGTGCTGTT<br>TGCACGACAA   | GAAGCATCTG<br>CTTCGTAGAC | CAGCGCCAGT<br>GTCGCGGTCA  |
| 23901 | GCGCCATTAT<br>CGCGGTAATA  | CTGCGACGCG<br>GACGCTGCGC  | TTGCAAGAGC<br>AACGTTCTCG   | GCAGCGATGT<br>CGTCGCTACA | GCCCCTCGCC<br>CGGGGAGCGG  |
| 23951 | ATAGCGGATG<br>TATCGCCTAC  | TCAGCCTTGC<br>AGTCGGAACG  | CTACGAACGC<br>GATGCTTGCG   | CACCTATTCT<br>GTGGATAAGA | CACCGCGCGT<br>GTGGCGCGCA  |

FIG. 10A-30

|       |            |            |             |            |            |
|-------|------------|------------|-------------|------------|------------|
| 24001 | ACCCCCCAA  | CGCCAAGAA  | ACGGCACATG  | CGAGCCCAAC | CCGCGCCTCA |
|       | TGGGGGGTTT | GCGGTTCTTT | TGCCGTGTAC  | GCTCGGGTTG | GGCGCGGAGT |
| 24051 | ACTTCTACCC | CGTATTTGCC | GTGCCAGAGG  | TGCTTGCCAC | CTATCACATC |
|       | TGAAGATGGG | GCATAAACGG | CACGGTCTCC  | ACGAACGGTG | GATAGTGTAG |
| 24101 | TTTTTCCAAA | ACTGCAAGAT | ACCCCTATCC  | TGCCGTGCCA | ACCGCAGCCG |
|       | AAAAAGGTTT | TGACGTTCTA | TGGGGATAGG  | ACGGCACGGT | TGGCGTCGGC |
| 24151 | AGCGGACAAG | CAGCTGGCCT | TGCGGCAGGG  | CGCTGTCATA | CCTGATATCG |
|       | TCGCCTGTTC | GTCGACCGGA | ACGCCGTCCC  | GCGACAGTAT | GGACTATAGC |
| 24201 | CCTCGCTCAA | CGAAGTGCCA | AAAATCTTTG  | AGGGTCTTGG | ACGCGACGAG |
|       | GGAGCGAGTT | GCTTCACGGT | TTTATAGAAAC | TCCCAGAACC | TGCGCTGCTC |
| 24251 | AAGCGCGCGG | CAAACGCTCT | GCAACAGGAA  | AACAGCGAAA | ATGAAAGTCA |
|       | TTGCGCGGCC | GTTTGCGAGA | CGTTGTCCTT  | TTGTCGCTTT | TACTTTCAGT |
| 24301 | CTCTGGAGTG | TTGGTGGAAC | TCGAGGGTGA  | CAACGCGCGC | CTAGCCGTAC |
|       | GAGACCTCAC | AACCACCTTG | AGCTCCCACT  | GTTGCGCGCG | GATCGGCATG |
| 24351 | TAAACGCAG  | CATCGAGGTC | ACCCACTTTG  | CCTACCCGGC | ACTTAACCTA |
|       | ATTTTGCGTC | GTAGCTCCAG | TGGGTGAAAC  | GGATGGGCCG | TGAATTGGAT |
| 24401 | CCCCCAAGG  | TCATGAGCAC | AGTCATGAGT  | GAGCTGATCG | TGCGCCGTGC |
|       | GGGGGGTTCC | AGTACTCGTG | TCAGTACTCA  | CTCGACTAGC | ACGCGGCACG |
| 24451 | GCAGCCCCTG | GAGAGGGATG | CAAATTTGCA  | AGAACAAACA | GAGGAGGGCC |
|       | CGTCGGGGAC | CTCTCCCTAC | GTTTAAACGT  | TCTTGTTTGT | CTCCTCCCGG |
| 24501 | TACCCGCAGT | TGGCGACGAG | CAGCTAGCGC  | GCTGGCTTCA | AACGCGCGAG |
|       | ATGGGCGTCA | ACCGCTGCTC | GTCGATCGCG  | CGACCGAAGT | TTGCGCGCTC |
| 24551 | CCTGCCGACT | TGGAGGAGCG | ACGCAAATA   | ATGATGGCCG | CAGTGCTCGT |
|       | GGACGGCTGA | ACCTCCTCGC | TGCGTTTGAT  | TACTACCGGC | GTCACGAGCA |
| 24601 | TACCGTGGAG | CTTGAGTGCA | TGCAGCGGTT  | CTTTGCTGAC | CCGGAGATGC |
|       | ATGGCACCTC | GAACACACGT | ACGTCGCCAA  | GAAACGACTG | GGCCTCTACG |
| 24651 | AGCGCAAGCT | AGAGGAAACA | TTGCACTACA  | CCTTTCGACA | GGGCTACGTA |
|       | TCGCGTTCGA | TCTCCTTTGT | AACGTGATGT  | GGAAAGCTGT | CCCGATGCAT |
| 24701 | CGCCAGGCCT | GCAAGATCTC | CAACGTGGAG  | CTCTGCAACC | TGGTCTCCTA |
|       | GCGGTCCGGA | CGTTCTAGAG | GTTGCACCTC  | GAGACGTTGG | ACCAGAGGAT |
| 24751 | CCTTGGAATT | TTGCACGAAA | ACCGCCTTGG  | GCAAAACGTG | CTTCATTCCA |
|       | GGAACCTTAA | AACGTGCTTT | TGGCGGAACC  | CGTTTTGCAC | GAAGTAAGGT |

FIG. 10A-31



|       |                          |                          |                           |                          |                           |
|-------|--------------------------|--------------------------|---------------------------|--------------------------|---------------------------|
| 24801 | CGCTCAAGGG<br>GCGAGTTCCC | CGAGGCGCGC<br>GCTCCGCGCG | CGCGACTACG<br>GCGCTGATGC  | TCCGCGACTG<br>AGGCGCTGAC | CGTTTACTTA<br>GCAAATGAAT  |
| 24851 | TTTCTATGCT<br>AAAGATACGA | ACACCTGGCA<br>TGTGGACCGT | GACGGCCATG<br>CTGCCGGTAC  | GGCGTTTGGC<br>CCGCAAACCG | AGCAGTGCTT<br>TCGTCACGAA  |
| 24901 | GGAGGAGTGC<br>CCTCCTCACG | AACCTCAAGG<br>TTGGAGTTCC | AGCTGCAGAA<br>TCGACGTCTT  | ACTGCTAAAG<br>TGACGATTTC | CAAAACTTGA<br>GTTTTGAACT  |
| 24951 | AGGACCTATG<br>TCCTGGATAC | GACGGCCTTC<br>CTGCCGGAAG | AACGAGCGCT<br>TTGCTCGCGA  | CCGTGGCCGC<br>GGCACCGGCG | GCACCTGGCG<br>CGTGGACCGC  |
| 25001 | GACATCATTT<br>CTGTAGTAAA | TCCCCGAACG<br>AGGGGCTTGC | CCTGCTTAAA<br>GGACGAATTT  | ACCCTGCAAC<br>TGGGACGTTG | AGGGTCTGCC<br>TCCCAGACGG  |
| 25051 | AGACTTCACC<br>TCTGAAGTGG | AGTCAAAGCA<br>TCAGTTTCGT | TGTTGCAGAA<br>ACAACGTCTT  | CTTTAGGAAC<br>GAAATCCTTG | TTTATCCTAG<br>AAATAGGATC  |
| 25101 | AGCGCTCAGG<br>TCGCGAGTCC | AATCTTGCCC<br>TTAGAACGGG | GCCACCTGCT<br>CGGTGGACGA  | GTGCACTTCC<br>CACGTGAAGG | TAGCGACTTT<br>ATCGCTGAAA  |
| 25151 | GTGCCCATTA<br>CACGGGTAAT | AGTACCGCGA<br>TCATGGCGCT | ATGCCCTCCG<br>TACGGGAGGC  | CCGCTTTGGG<br>GGCGAAACCC | GCCACTGCTA<br>CGGTGACGAT  |
| 25201 | CCTTCTGCAG<br>GGAAGACGTC | CTAGCCAACT<br>GATCGGTTGA | ACCTTGCCTA<br>TGGAACGGAT  | CCACTCTGAC<br>GGTGAGACTG | ATAATGGAAG<br>TATTACCTTC  |
| 25251 | ACGTGAGCGG<br>TGCACTCGCC | TGACGGTCTA<br>ACTGCCAGAT | CTGGAGTGTC<br>GACCTCACAG  | ACTGTGCTG<br>TGACAGCGAC  | CAACCTATGC<br>GTTGGATACG  |
| 25301 | ACCCCGCACC<br>TGGGGCGTGG | GCTCCCTGGT<br>CGAGGGACCA | TTGCAATTCTG<br>AACGTTAAGC | CAGCTGCTTA<br>GTCGACGAAT | ACGAAAGTCA<br>TGCTTTCAGT  |
| 25351 | AATTATCGGT<br>TTAATAGCCA | ACCTTTGAGC<br>TGGAAACTCG | TGCAGGGTCC<br>ACGTCCCAGG  | CTCGCCTGAC<br>GAGCGGACTG | GAAAAGTCCG<br>CTTTTCAGGC  |
| 25401 | CGGCTCCGGG<br>GCCGAGGCC  | GTTGAAACTC<br>CAACTTTGAG | ACTCCGGGGC<br>TGAGGCCCCG  | TGTGGACGTC<br>ACACCTGCAG | GGCTTACCTT<br>CCGAATGGAA  |
| 25451 | CGCAAATTTG<br>GCGTTTAAAC | TACCTGAGGA<br>ATGGACTCCT | CTACCACGCC<br>GATGGTGCGG  | CACGAGATTA<br>GTGCTCTAAT | GGTTCCTACGA<br>CCAAGATGCT |
| 25501 | AGACCAATCC<br>TCTGGTTAGG | CGCCCGCCTA<br>GCGGGCGGAT | ATGCGGAGCT<br>TACGCCTCGA  | TACCGCCTGC<br>ATGGCGGACG | GTCATTACCC<br>CAGTAATGGG  |
| 25551 | AGGGCCACAT<br>TCCCGGTGTA | TCTTGGCCAA<br>AGAACCGGTT | TTGCAAGCCA<br>AACGTTCCGT  | TCAACAAAGC<br>AGTTGTTTCG | CCGCCAAGAG<br>GGCGGTTCTC  |

FIG. 10A-32

|       |                          |                           |                          |                           |                          |
|-------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| 25601 | TTTCTGCTAC<br>AAAGACGATG | GAAAGGGACG<br>CTTTCCTG    | GGGGGTTTAC<br>CCCCCAAATG | TTGGACCCCC<br>AACCTGGGGG  | AGTCCGGCGA<br>TCAGGCCGCT |
| 25651 | GGAGCTCAAC<br>CCTCGAGTTG | CCAATCCCCC<br>GGTTAGGGGG  | CGCCGCCGCA<br>GCGGCGGCGT | GCCCTATCAG<br>CGGGATAGTC  | CAGCAGCCGC<br>GTCGTCGGCG |
| 25701 | GGGCCCTTGC<br>CCCGGGAACG | TTCCCAGGAT<br>AAGGGTCCTA  | GGCACCCAAA<br>CCGTGGGTTT | AAGAAGCTGC<br>TTCTTCGACG  | AGCTGCCGCC<br>TCGACGGCGG |
| 25751 | GCCACCCACG<br>CGGTGGGTGC | GACGAGGAGG<br>CTGCTCCTCC  | AATACTGGGA<br>TTATGACCCT | CAGTCAGGCA<br>GTCAGTCCGT  | GAGGAGGTTT<br>CTCCTCCAAA |
| 25801 | TGGACGAGGA<br>ACCTGCTCCT | GGAGGAGGAC<br>CCTCCTCCTG  | ATGATGGAAG<br>TACTACCTTC | ACTGGGAGAG<br>TGACCCTCTC  | CCTAGACGAG<br>GGATCTGCTC |
| 25851 | GAAGCTTCCG<br>CTTCGAAGGC | AGGTCGAAGA<br>TCCAGCTTCT  | GGTGTCAGAC<br>CCACAGTCTG | GAAACACCGT<br>CTTTGTGGCA  | CACCCTCGGT<br>GTGGGAGCCA |
| 25901 | CGCATTCCCC<br>GCGTAAGGGG | TCGCCGGCGC<br>AGCGGCCGCG  | CCCAGAAATC<br>GGGTCTTTAG | GGCAACCGGT<br>CCGTGCGCCA  | TCCAGCATGG<br>AGGTCGTACC |
| 25951 | CTACAACCTC<br>GATGTTGGAG | CGCTCCTCAG<br>GCGAGGAGTC  | GCGCCGCCGG<br>CGCGGCGGCC | CACTGCCCCGT<br>GTGACGGGCA | TCGCCGACCC<br>AGCGGCTGGG |
| 26001 | AACCGTAGAT<br>TTGGCATCTA | GGGACACCAC<br>CCCTGTGGTG  | TGGAACCAGG<br>ACCTTGGTCC | GCCGGTAAGT<br>CGGCCATTCA  | CCAAGCAGCC<br>GGTTCGTCGG |
| 26051 | GCCGCCGTTA<br>CGGCGGCAAT | GCCCAAGAGC<br>CGGGTTCTCG  | AACAACAGCG<br>TTGTTGTCGC | CCAAGGCTAC<br>GGTTCCGATG  | CGCTCATGGC<br>GCGAGTACCG |
| 26101 | GCGGGCACAA<br>CGCCCGTGTT | GAACGCCATA<br>CTTGCGGTAT  | GTTGCTTGCT<br>CAACGAACGA | TGCAAGACTG<br>ACGTTCTGAC  | TGGGGGCAAC<br>ACCCCGTTG  |
| 26151 | ATCTCCTTCG<br>TAGAGGAAGC | CCCGCCGCTT<br>GGGCGGCGAA  | TCTTCTCTAC<br>AGAAGAGATG | CATCACGGCG<br>GTAGTGCCGC  | TGGCCTTCCC<br>ACCGGAAGGG |
| 26201 | CCGTAACATC<br>GGCATTGTAG | CTGCATTACT<br>GACGTAATGA  | ACCGTCATCT<br>TGGCAGTAGA | CTACAGCCCA<br>GATGTCGGGT  | TACTGCACCG<br>ATGACGTGGC |
| 26251 | GCGGCAGCGG<br>CGCCGTCGCC | CAGCAACAGC<br>GTCGTTGTCTG | AGCGGCCACA<br>TCGCCGGTGT | CAGAAGCAAA<br>GTCTTCGTTT  | GGCGACCGGA<br>CCGCTGGCCT |
| 26301 | TAGCAAGACT<br>ATCGTTCTGA | CTGACAAAGC<br>GACTGTTTCG  | CCAAGAAATC<br>GGTTCCTTAG | CACAGCGGCG<br>GTGTCGCCGC  | GCAGCAGCAG<br>CGTCGTCGTC |
| 26351 | GAGGAGGAGC<br>CTCCTCCTCG | GCTGCGTCTG<br>CGACGCAGAC  | GCGCCCAACG<br>CGCGGGTTGC | AACCCGTATC<br>TTGGGCATAG  | GACCCGCGAG<br>CTGGGCGCTC |

FIG. 10A-33

|       |                           |                          |                           |                           |                           |
|-------|---------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 26401 | CTTAGAAACA<br>GAATCTTTGT  | GGATTTTTC<br>CCTAAAAAGG  | CACTCTGTAT<br>GTGAGACATA  | GCTATATTTTC<br>CGATATAAAG | AACAGAGCAG<br>TTGTCTCGTC  |
| 26451 | GGGCCAAGAA<br>CCCGGTTCCTT | CAAGAGCTGA<br>GTTCTCGACT | AAATAAAAAA<br>TTTATTTTTT  | CAGGTCTCTG<br>GTCCAGAGAC  | CGATCCCTCA<br>GCTAGGGAGT  |
| 26501 | CCCGCAGCTG<br>GGGCGTCGAC  | CCTGTATCAC<br>GGACATAGTG | AAAAGCGAAG<br>TTTTCGCTTC  | ATCAGCTTTCG<br>TAGTCGAAGC | GCGCACGCTG<br>CGCGTGCGAC  |
| 26551 | GAAGACGCGG<br>CTTCTGCGCC  | AGGCTCTCTT<br>TCCGAGAGAA | CAGTAAATAC<br>GTCATTTATG  | TGCGCGCTGA<br>ACGCGCGACT  | CTCTTAAGGA<br>GAGAATTCCT  |
| 26601 | CTAGTTTTCG<br>GATCAAAGCG  | GCCCTTTCTC<br>CGGGAAAGAG | AAATTTAAGC<br>TTTAAATTTCG | GCGAAAACATA<br>CGCTTTTGAT | CGTCATCTCC<br>GCAGTAGAGG  |
| 26651 | AGCGGCCACA<br>TCGCCGGTGT  | CCCGGCGCCA<br>GGGCCGCGGT | GCACCTGTTG<br>CGTGGACAAC  | TCAGCGCCAT<br>AGTCGCGGTA  | TATGAGCAAG<br>ATACTCGTTC  |
| 26701 | GAAATTCCCA<br>CTTTAAGGGT  | CGCCCTACAT<br>GCGGGATGTA | GTGGAGTTAC<br>CACCTCAATG  | CAGCCACAAA<br>GTCGGTGTTT  | TGGGACTTGC<br>ACCCTGAACG  |
| 26751 | GGCTGGAGCT<br>CCGACCTCGA  | GCCCAAGACT<br>CGGGTTCTGA | ACTCAACCCG<br>TGAGTTGGGC  | AATAAACTAC<br>TTATTTGATG  | ATGAGCGCGG<br>TACTCGCGCC  |
| 26801 | GACCCACAT<br>CTGGGGTGTA   | GATATCCCGG<br>CTATAGGGCC | GTCAACGGAA<br>CAGTTGCCTT  | TACGCGCCCA<br>ATGCGCGGGT  | CCGAAACCGA<br>GGCTTTGGCT  |
| 26851 | ATTCTCCTGG<br>TAAGAGGACC  | AACAGGCGGC<br>TTGTCCGCCG | TATTACCACC<br>ATAATGGTGG  | ACACCTCGTA<br>TGTGGAGCAT  | ATAACCTTAA<br>TATTGGAATT  |
| 26901 | TCCCCGTAGT<br>AGGGGCATCA  | TGGCCCGCTG<br>ACCGGGCGAC | CCCTGGTGTA<br>GGGACCACAT  | CCAGGAAAGT<br>GGTCCTTTCA  | CCCGCTCCCA<br>GGGCGAGGGT  |
| 26951 | CCACTGTGGT<br>GGTGACACCA  | ACTTCCCAGA<br>TGAAGGGTCT | GACGCCCAGG<br>CTGCGGGTCC  | CCGAAGTTCA<br>GGCTTCAAGT  | GATGACTAAC<br>CTACTGATTG  |
| 27001 | TCAGGGGCGC<br>AGTCCCCGCG  | AGCTTGCGGG<br>TCGAACGCCC | CGGCTTTTCGT<br>GCCGAAAGCA | CACAGGGTGC<br>GTGTCCCACG  | GGTCGCCCCG<br>CCAGCGGGCC  |
| 27051 | GCAGGGTATA<br>CGTCCCATAT  | ACTCACCTGA<br>TGAGTGGACT | CAATCAGAGG<br>GTTAGTCTCC  | GCGAGGTATT<br>CGCTCCATAA  | CAGCTCAACG<br>GTCGAGTTGC  |
| 27101 | ACGAGTCGGT<br>TGCTCAGCCA  | GAGCTCCTCG<br>CTCGAGGAGC | CTTGGTCTCC<br>GAACCAGAGG  | GTCCGGACGG<br>CAGGCCTGCC  | GACATTTTCAG<br>CTGTAAAGTC |
| 27151 | ATCGGCGGGC<br>TAGCCGCCGC  | CCGGCCGCTC<br>GGCCGGCGAG | TTCATTCACG<br>AAGTAAGTGC  | CCTCGTCAGG<br>GGAGCAGTCC  | CAATCCTAAC<br>GTTAGGATTG  |

FIG. 10A-34

|       |                          |                           |                          |                          |                          |
|-------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 27201 | TCTGCAGACC<br>AGACGTCTGG | TCGTCCTCTG<br>AGCAGGAGAC  | AGCCGCGCTC<br>TCGGCGCGAG | TGGAGGCATT<br>ACCTCCGTAA | GGAAGTCTGC<br>CCTTGAGACG |
| 27251 | AATTTATTGA<br>TTAAATAACT | GGAGTTTGTG<br>CCTCAAACAC  | CCATCGGTCT<br>GGTAGCCAGA | ACTTTAACCC<br>TGAAATTGGG | CTTCTCGGGA<br>GAAGAGCCCT |
| 27301 | CCTCCCGGCC<br>GGAGGGCCGG | ACTATCCGGA<br>TGATAGGCCT  | TCAATTTATT<br>AGTTAAATAA | CCTAACTTTG<br>GGATTGAAAC | ACGCGGTAAA<br>TGCGCCATTT |
| 27351 | GGACTCGGCG<br>CCTGAGCCGC | GACGGCTACG<br>CTGCCGATGC  | ACTGAATGTT<br>TGAATTACAA | AAGTGGAGAG<br>TTCACCTCTC | GCAGAGCAAC<br>CGTCTCGTTG |
| 27401 | TGCGCCTGAA<br>ACGCGGACTT | ACACCTGGTC<br>TGTGGACCAG  | CACTGTCGCC<br>GTGACAGCGG | GCCACAAGTG<br>CGGTGTTTAC | CTTTGCCCGC<br>GAAACGGGCG |
| 27451 | GACTCCGGTG<br>CTGAGGCCAC | AGTTTTGCTA<br>TCAAAACGAT  | CTTTGAATTG<br>GAAACTTAAC | CCCGAGGATC<br>GGGCTCCTAG | ATATCGAGGG<br>TATAGCTCCC |
| 27501 | CCCGGCGCAC<br>GGGCCGCGTG | GGCGTCCGGC<br>CCGCAGGCCG  | TTACCGCCCA<br>AATGGCGGGT | GGGAGAGCTT<br>CCCTCTCGAA | GCCCGTAGCC<br>CGGGCATCGG |
| 27551 | TGATTCGGGA<br>ACTAAGCCCT | GTTTACCCAG<br>CAAATGGGTC  | CGCCCCCTGC<br>GCGGGGGACG | TAGTTGAGCG<br>ATCAACTCGC | GGACAGGGGA<br>CCTGTCCCCT |
| 27601 | CCCTGTGTTC<br>GGGACACAAG | TCACTGTGAT<br>AGTGACACTA  | TTGCAACTGT<br>AACGTTGACA | CCTAACCCTG<br>GGATTGGGAC | GATTACATCA<br>CTAATGTAGT |
| 27651 | AGATCTTTGT<br>TCTAGAAACA | TGCCATCTCT<br>ACGGTAGAGA  | GTGCTGAGTA<br>CACGACTCAT | TAATAAATAC<br>ATTATTTATG | AGAAATTAAA<br>TCTTTAATTT |
| 27701 | ATATACTGGG<br>TATATGACCC | GCTCCTATCG<br>CGAGGATAGC  | CCATCCTGTA<br>GGTAGGACAT | AACGCCACCG<br>TTGCGGTGGC | TCTTCACCCG<br>AGAAGTGGGC |
| 27751 | CCCAAGCAAA<br>GGGTTCGTTT | CCAAGGCGAA<br>GGTTCCGCTT  | CCTTACCTGG<br>GGAATGGACC | TACTTTTAAC<br>ATGAAAATTG | ATCTCTCCCT<br>TAGAGAGGGA |
| 27801 | CTGTGATTTA<br>GACACTAAAT | CAACAGTTTC<br>GTTGTCAAAG  | AACCCAGACG<br>TTGGGTCTGC | GAGTGAGTCT<br>CTCACTCAGA | ACGAGAGAAC<br>TGCTCTCTTG |
| 27851 | CTCTCCGAGC<br>GAGAGGCTCG | TCAGCTACTC<br>AGTCGATGAG  | CATCAGAAAA<br>GTAGTCTTTT | AACACCACCC<br>TTGTGGTGGG | TCCTTACCTG<br>AGGAATGGAC |
| 27901 | CCGGAACGT<br>GGCCCTTGCA  | ACGAGTGCGT<br>TGCTCACGCA  | CACCGGCCGC<br>GTGGCCGGCG | TGCACCACAC<br>ACGTGGTGTG | CTACCGCCTG<br>GATGGCGGAC |
| 27951 | ACCGTAAACC<br>TGGCATTTGG | AGACTTTTTTC<br>TCTGAAAAAG | CGGACAGACC<br>GCCTGTCTGG | TCAATAACTC<br>AGTTATTGAG | TGTTTACCAG<br>ACAAATGGTC |

FIG. 10A-35

|       |                           |                          |                          |                          |                           |
|-------|---------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| 28001 | AACAGGAGGT<br>TTGTCTCCA   | GAGCTTAGAA<br>CTCGAATCTT | AACCCTTAGG<br>TTGGGAATCC | GTATTAGGCC<br>CATAATCCGG | AAAGGCGCAG<br>TTCCGCGTC   |
| 28051 | CTACTGTGGG<br>GATGACACCC  | GTTTATGAAC<br>CAAATACTTG | AATTCAAGCA<br>TTAAGTTCGT | ACTCTACGGG<br>TGAGATGCCC | CTATTCTAAT<br>GATAAGATTA  |
| 28101 | TCAGGTTTCT<br>AGTCCAAAGA  | CTAGAATCGG<br>GATCTTAGCC | GGTTGGGGTT<br>CCAACCCCAA | ATTCTCTGTC<br>TAAGAGACAG | TTGTGATTCT<br>AACACTAAGA  |
| 28151 | CTTTATTCTT<br>GAAATAAGAA  | ATACTAACGC<br>TATGATTGCG | TTCTCTGCCT<br>AAGAGACGGA | AAGGCTCGCC<br>TTCCGAGCGG | GCCTGCTGTG<br>CGGACGACAC  |
| 28201 | TGCACATTTG<br>ACGTGTAAAC  | CATTTATTGT<br>GTAAATAACA | CAGCTTTTTA<br>GTCGAAAAT  | AACGCTGGGG<br>TTGCGACCCC | TCGCCACCCA<br>AGCGGTGGGT  |
| 28251 | AGATGATTAG<br>TCTACTAATC  | GTACATAATC<br>CATGTATTAG | CTAGGTTTAC<br>GATCCAAATG | TCACCCTTGC<br>AGTGGGAACG | GTCAGCCCAC<br>CAGTCGGGTG  |
| 28301 | GGTACCACCC<br>CCATGGTGGG  | AAAAGGTGGA<br>TTTTCCACCT | TTTTAAGGAG<br>AAAATTCCTC | CCAGCCTGTA<br>GGTCGGACAT | ATGTTACATT<br>TACAATGTAA  |
| 28351 | CGCAGCTGAA<br>GCGTCGACTT  | GCTAATGAGT<br>CGATTACTCA | GCACCACTCT<br>CGTGGTGAGA | TATAAAATGC<br>ATATTTTACG | ACCACAGAAC<br>TGGTGTCTTG  |
| 28401 | ATGAAAAGCT<br>TACTTTTTCGA | GCTTATTCGC<br>CGAATAAGCG | CACAAAAACA<br>GTGTTTTTGT | AAATTGGCAA<br>TTTAACCGTT | GSTATGCTGTT<br>CATACGACAA |
| 28451 | TATGCTATTT<br>ATACGATAAA  | GGCAGCCAGG<br>CCGTCGGTCC | TGACACTACA<br>ACTGTGATGT | GAGTATAATG<br>CTCATATTAC | TTACAGTTTT<br>AATGTCAAAA  |
| 28501 | CCAGGGTAAA<br>GGTCCCATTT  | AGTCATAAAA<br>TCAGTATTTT | CTTTTATGTA<br>GAAAATACAT | TACTTTTCCA<br>ATGAAAAGGT | TTTTATGAAA<br>AAAATACTTT  |
| 28551 | TGTGCGACAT<br>ACACGCTGTA  | TACCATGTAC<br>ATGGTACATG | ATGAGCAAAC<br>TACTCGTTTG | AGTATAAGTT<br>TCATATTCAA | GTGGCCCCCA<br>CACCGGGGGT  |
| 28601 | CAAAATTGTG<br>GTTTTAACAC  | TGGAAACAC<br>ACCTTTTGTG  | TGGCACTTTC<br>ACCGTGAAAG | TGCTGCACTG<br>ACGACGTGAC | CTATGCTAAT<br>GATACGATTA  |
| 28651 | TACAGTGCTC<br>ATGTCACGAG  | GCTTTGGTCT<br>CGAAACCAGA | GTACCCTACT<br>CATGGGATGA | CTATATTAAA<br>GATATAATTT | TACAAAAGCA<br>ATGTTTTTCGT |
| 28701 | GACGCAGCTT<br>CTGCGTCGAA  | TATTGAGGAA<br>ATAACTCCTT | AAGAAAATGC<br>TTCTTTTACG | CTTAATTTAC<br>GAATTAAATG | TAAGTTACAA<br>ATTCAATGTT  |
| 28751 | AGCTAATGTC<br>TCGATTACAG  | ACCACTAACT<br>TGGTGATTGA | GCTTTACTCG<br>CGAAATGAGC | CTGCTTGCAA<br>GACGAACGTT | AACAAATTCA<br>TTGTTTAAGT  |

FIG. 10A-36

|       |                          |                          |                           |                          |                           |
|-------|--------------------------|--------------------------|---------------------------|--------------------------|---------------------------|
| 28801 | AAAAGTTAGC<br>TTTTCAATCG | ATTATAATTA<br>TAATATTAAT | GAATAGGATT<br>CTTATCCTAA  | TAAACCCCCC<br>ATTTGGGGGG | GGTCATTTCC<br>CCAGTAAAGG  |
| 28851 | TGCTCAATAC<br>ACGAGTTATG | CATTCCCCTG<br>GTAAGGGGAC | AACAATTGAC<br>TTGTTAACTG  | TCTATGTGGG<br>AGATACACCC | ATATGCTCCA<br>TATACGAGGT  |
| 28901 | GCGCTACAAC<br>CGCGATGTTG | CTTGAAGTCA<br>GAACTTCAGT | GGCTTCCTGG<br>CCGAAGGACC  | ATGTCAGCAT<br>TACAGTCGTA | CTGACTTTGG<br>GACTGAAACC  |
| 28951 | CCAGCACCTG<br>GGTCGTGGAC | TCCCGCGGAT<br>AGGGCGCCTA | TTGTTCCAGT<br>AACAAGGTCA  | CCAACTACAG<br>GGTTGATGTC | CGACCCACCC<br>GCTGGGTGGG  |
| 29001 | TAACAGAGAT<br>ATTGTCTCTA | GACCAACACA<br>CTGGTTGTGT | ACCAACGCGG<br>TGTTTGCGCC  | CCGCCGCTAC<br>GGCGGCGATG | CGGACTTACA<br>GCCTGAATGT  |
| 29051 | TCTACCACAA<br>AGATGGTGTT | ATACACCCCA<br>TATGTGGGGT | AGTTTCTGCC<br>TCAAAGACGG  | TTTGTCAATA<br>AAACAGTTAT | ACTGGGATAA<br>TGACCCTATT  |
| 29101 | CTTGGGCATG<br>GAACCCGTAC | TGGTGGTTCT<br>ACCACCAAGA | CCATAGCGCT<br>GGTATCGCGA  | TATGTTTGTA<br>ATACAAACAT | TGCCTTATTA<br>ACGGAATAAT  |
| 29151 | TTATGTGGCT<br>AATACACCGA | CATCTGCTGC<br>GTAGACGACG | CTAAAGCGCA<br>GATTTTCGCGT | AACGCGCCCG<br>TTGCGCGGGC | ACCACCCATC<br>TGGTGGGTAG  |
| 29201 | TATAGTCCCA<br>ATATCAGGGT | TCATTGTGCT<br>AGTAACACGA | ACACCCAAAC<br>TGTGGGTTTG  | AATGATGGAA<br>TTACTACCTT | TCCATAGATT<br>AGGTATCTAA  |
| 29251 | GGACGGACTG<br>CCTGCCTGAC | AAACACATGT<br>TTTGTGTACA | TCTTTTCTCT<br>AGAAAAGAGA  | TACAGTATGA<br>ATGTCATACT | TTAAATGAGA<br>AATTTACTCT  |
| 29301 | CATGATTCCT<br>GTACTAAGGA | CGAGTTTTTA<br>GCTCAAAAAT | TATTACTGAC<br>ATAATGACTG  | CCTTGTTGCG<br>GGAACAACGC | CTTTTTTTGTG<br>GAAAAAACAC |
| 29351 | CGTGCTCCAC<br>GCACGAGGTG | ATTGGCTGCG<br>TAACCGACGC | GTTTCTCACA<br>CAAAGAGTGT  | TCGAAGTAGA<br>AGCTTCATCT | CTGCATTCCA<br>GACGTAAGGT  |
| 29401 | GCCTTCACAG<br>CGGAAGTGTC | TCTATTTGCT<br>AGATAAACGA | TTACGGATTT<br>AATGCCATAA  | GTCACCCTCA<br>CAGTGGGAGT | CGCTCATCTG<br>GCGAGTAGAC  |
| 29451 | CAGCCTCATC<br>GTCGGAGTAG | ACTGTGGTCA<br>TGACACCAGT | TCGCCTTTAT<br>AGCGGAAATA  | CCAGTGCATT<br>GGTCACGTAA | GACTGGGTCT<br>CTGACCCAGA  |
| 29501 | GTGTGCGCTT<br>CACACGCGAA | TGCATATCTC<br>ACGTATAGAG | AGACACCATC<br>TCTGTGGTAG  | CCCAGTACAG<br>GGGTCATGTC | GGACAGGACT<br>CCTGTCCTGA  |
| 29551 | ATAGCTGAGC<br>TATCGACTCG | TTCTTAGAAT<br>AAGAATCTTA | TCTTTAATTA<br>AGAAATTAAT  | TGAAATTTAC<br>ACTTTAAATG | TGTGACTTTT<br>ACACTGAAAA  |

FIG. 10A-37

|       |             |            |             |            |            |
|-------|-------------|------------|-------------|------------|------------|
| 29601 | CTGCTGATTA  | TTTGCACCCT | ATCTGCGTTT  | TGTTCCCCGA | CCTCCAAGCC |
|       | GACGACTAAT  | AAACGTGGGA | TAGACGCAAA  | ACAAGGGGCT | GGAGGTTTCG |
| 29651 | TCAAAGACAT  | ATATCATGCA | GATTCACCTCG | TATATGGAAT | ATTCCAAGTT |
|       | AGTTTCTGTA  | TATAGTACGT | CTAAGTGAGC  | ATATACCTTA | TAAGGTTCAA |
| 29701 | GCTACAATGA  | AAAAAGCGAT | CTTTCCGAAG  | CCTGGTTATA | TGCAATCATC |
|       | CGATGTTACT  | TTTTTCGCTA | GAAAGGCTTC  | GGACCAATAT | ACGTTAGTAG |
| 29751 | TCTGTTATGG  | TGTTCTGCAG | TACCATCTTA  | GCCCTAGCTA | TATATCCCTA |
|       | AGACAATACC  | ACAAGACGTC | ATGGTAGAAT  | CGGGATCGAT | ATATAGGGAT |
| 29801 | CCTTGACATT  | GGCTGGAACG | CAATAGATGC  | CATGAACCAC | CCAACTTTCC |
|       | GGAAGTGTAA  | CCGACCTTGC | GTTATCTACG  | GTACTTGGTG | GGTTGAAAGG |
| 29851 | CCGCGCCCGC  | TATGCTTCCA | CTGCAACAAG  | TTGTTGCCGG | CGGCTTTGTC |
|       | GGCGCGGGCG  | ATACGAAGGT | GACGTTGTTC  | AACAACGGCC | GCCGAAACAG |
| 29901 | CCAGCCAATC  | AGCCTCGCCC | ACCTTCTCCC  | ACCCCCACTG | AAATCAGCTA |
|       | GGTCGGTTAG  | TCGGAGCGGG | TGGAAGAGGG  | TGGGGGTGAC | TTTAGTCGAT |
| 29951 | CTTTAATCTA  | ACAGGAGGAG | ATGACTGACA  | CCCTAGATCT | AGAAATGGAC |
|       | GAAATTAGAT  | TGTCCTCCTC | TACTGACTGT  | GGGATCTAGA | TCTTTACCTG |
| 30001 | GGAATTATTA  | CAGAGCAGCG | CCTGCTAGAA  | AGACGCAGGG | CAGCGGCCGA |
|       | CCTTAATAAT  | GTCTCGTCGC | GGACGATCTT  | TCTGCGTCCC | GTCGCCGGCT |
| 30051 | GCAACAGCGC  | ATGAATCAAG | AGCTCCAAGA  | CATGGTTAAC | TTGCACCAGT |
|       | CGTTGTCGCG  | TACTTAGTTC | TCGAGGTTCT  | GTACCAATTG | AACGTGGTCA |
| 30101 | GCAAAAGGGG  | TATCTTTTGT | CTCGTAAAGC  | AGGCCAAAGT | CACCTACGAC |
|       | CGTTTTCCCC  | ATAGAAAACA | GAGCATTTTC  | TCCGGTTTCA | GTGGATGCTG |
| 30151 | AGTAATACCA  | CCGGACACCG | CCTTAGCTAC  | AAGTTGCCAA | CCAAGCGTCA |
|       | TCATTATGGT  | GGCCTGTGGC | GGAATCGATG  | TTCAACGGTT | GGTTCGCAGT |
| 30201 | GAAATTGGTG  | GTCATGGTGG | GAGAAAAGCC  | CATTACCATA | ACTCAGCACT |
|       | CTTTAACCAC  | CAGTACCACC | CTCTTTTCGG  | GTAATGGTAT | TGAGTCGTGA |
| 30251 | CGGTAGAAAC  | CGAAGGCTGC | ATTCACCTCAC | CTTGTCAAGG | ACCTGAGGAT |
|       | GCCATCTTTG  | GCTTCCGACG | TAAGTGAGTG  | GAACAGTTCC | TGGACTCCTA |
| 30301 | CTCTGCACCC  | TTATTAAGAC | CCTGTGCGGT  | CTCAAAGATC | TTATTCCCTT |
|       | GAGACGTGGG  | AATAATTCTG | GGACACGCCA  | GAGTTTCTAG | AATAAGGGAA |
| 30351 | TAAC TAATAA | AAAAAAATAA | TAAAGCATCA  | CTTACTTAAA | ATCAGTTAGC |
|       | ATTGATTATT  | TTTTTTTATT | ATTCGTTAGT  | GAATGAATTT | TAGTCAATCG |

FIG. 10A-38

|       |                          |                           |                           |                          |                           |
|-------|--------------------------|---------------------------|---------------------------|--------------------------|---------------------------|
| 30401 | AAATTTCTGT<br>TTTAAAGACA | CCAGTTTATT<br>GGTCAAATAA  | CAGCAGCACC<br>GTCGTCGTGG  | TCCTTGCCCT<br>AGGAACGGGA | CCTCCCAGCT<br>GGAGGGTCTGA |
| 30451 | CTGGTATTGC<br>GACCATAACG | AGCTTCCTCC<br>TCGAAGGAGG  | TGGCTGCAAA<br>ACCGACGTTT  | CTTTCTCCAC<br>GAAAGAGGTG | AATCTAAATG<br>TTAGATTTAC  |
| 30501 | GAATGTCAGT<br>CTTACAGTCA | TTCTCCTGT<br>AAGGAGGACA   | TCCTGTCCAT<br>AGGACAGGTA  | CCGCACCCAC<br>GGCGTGGGTG | TATCTTCATG<br>ATAGAAGTAC  |
| 30551 | TTGTTGCAGA<br>AACAACGTCT | TGAAGCGCGC<br>ACTTCGCGCG  | AAGACCGTCT<br>TTCTGGCAGA  | GAAGATACCT<br>CTTCTATGGA | TCAACCCCGT<br>AGTTGGGGCA  |
| 30601 | GTATCCATAT<br>CATAGGTATA | GACACGGAAA<br>CTGTGCCTTT  | CCGGTCCTCC<br>GGCCAGGAGG  | AACTGTGCCT<br>TTGACACGGA | TTTCTTACTC<br>AAAGAATGAG  |
| 30651 | CTCCCTTTGT<br>GAGGGAAACA | ATCCCCCAAT<br>TAGGGGGTTA  | GGGTTTCAAG<br>CCCAAAGTTC  | AGAGTCCCCC<br>TCTCAGGGGG | TGGGGTACTC<br>ACCCCATGAG  |
| 30701 | TCTTTGCGCC<br>AGAAACGCGG | TATCCGAACC<br>ATAGGCTTGG  | TCTAGTTACC<br>AGATCAATGG  | TCCAATGGCA<br>AGGTTACCGT | TGCTTGCGCT<br>ACGAACGCGA  |
| 30751 | CAAAATGGGC<br>GTTTTACCCG | AACGGCCTCT<br>TTGCCGGAGA  | CTCTGGACGA<br>GAGACCTGCT  | GGCCGGCAAC<br>CCGGCCGTTG | CTTACCTCCC<br>GAATGGAGGG  |
| 30801 | AAAATGTAAC<br>TTTTACATTG | CACTGTGAGC<br>GTGACACTCG  | CCACCTCTCA<br>GGTGGAGAGT  | AAAAAACCAA<br>TTTTTTGGTT | GTCAAACATA<br>CAGTTTGTAT  |
| 30851 | AACCTGGA<br>TTGGACCTTT   | TATCTGCACC<br>ATAGACGTGG  | CCTCACAGTT<br>GGAGTGTC    | ACCTCAGAAG<br>TGGAGTCTTC | CCCTAACTGT<br>GGGATTGACA  |
| 30901 | GGCTGCCGCC<br>CCGACGGCGG | GCACCTCTAA<br>CGTGGAGATT  | TGGTCGCGGG<br>ACCAGCGCCC  | CAACACACTC<br>GTTGTGTGAG | ACCATGCAAT<br>TGGTACGTTA  |
| 30951 | CACAGGCCCC<br>GTGTCCGGGG | GCTAACCGTG<br>CGATTGGCAC  | CACGACTCCA<br>GTGCTGAGGT  | AACTTAGCAT<br>TTGAATCGTA | TGCCACCCAA<br>ACGGTGGGTT  |
| 31001 | GGACCCCTCA<br>CCTGGGGAGT | CAGTGTGAGA<br>GTCACAGTCT  | AGGAAAGCTA<br>TCCTTTCGAT  | GCCCTGCAAA<br>CGGGACGTTT | CATCAGGCCC<br>GTAGTCCGGG  |
| 31051 | CCTCACCACC<br>GGAGTGGTGG | ACCGATAGCA<br>TGGCTATCGT  | GTACCCTTAC<br>CATGGGAATG  | TATCACTGCC<br>ATAGTGACGG | TCACCCCTT<br>AGTGGGGGAA   |
| 31101 | TAATACTGTC<br>ATTGATGACG | CACTGGTAGC<br>GTGACCATCG  | TTGGGCATTG<br>AACCCGTAAC  | ACTTGAAAGA<br>TGAACTTTCT | GCCCATTTAT<br>CGGGTAAATA  |
| 31151 | ACACAAAATG<br>TGTGTTTTAC | GAAAAC TAGG<br>CTTTTGATCC | ACTAAAGTAC<br>TGATTT CATG | GGGGCTCCTT<br>CCCCGAGGAA | TGCATGTAAC<br>ACGTACATTG  |

FIG. 10A-39



|       |                          |                          |                          |                           |                            |
|-------|--------------------------|--------------------------|--------------------------|---------------------------|----------------------------|
| 31201 | AGACGACCTA<br>TCTGCTGGAT | AACACTTTGA<br>TTGTGAAACT | CCGTAGCAAC<br>GGCATCGTTG | TGGTCCAGGT<br>ACCAGGTCCA  | GTGACTATTA<br>CACTGATAAT   |
| 31251 | ATAATACTTC<br>TATTATGAAG | CTTGCAAAC<br>GAACGTTTGA  | AAAGTTACTG<br>TTTCAATGAC | GAGCCTTGGG<br>CTCGGAACCC  | TTTTGATTCA<br>AAAACATAAGT  |
| 31301 | CAAGGCAATA<br>GTTCCGTTAT | TGCAACTTAA<br>ACGTTGAATT | TGTAGCAGGA<br>ACATCGTCCT | GGACTAAGGA<br>CCTGATTCCCT | TTGATTCTCA<br>AACTAAGAGT   |
| 31351 | AAACAGACGC<br>TTTGTCTGCG | CTTATACTTG<br>GAATATGAAC | ATGTTAGTTA<br>TACAATCAAT | TCCGTTTGAT<br>AGGCAAACCTA | GCTCAAAACC<br>CGAGTTTTTG   |
| 31401 | AACTAAATCT<br>TTGATTTAGA | AAGACTAGGA<br>TTCTGATCCT | CAGGGCCCTC<br>GTCCCGGGAG | TTTTTATAAA<br>AAAAATATTT  | CTCAGCCCAC<br>GAGTCGGGTG   |
| 31451 | AACTTGGATA<br>TTGAACCTAT | TTAACTACAA<br>AATTGATGTT | CAAAGGCCTT<br>GTTTCCGGAA | TACTTGTTTA<br>ATGAACAAAT  | CAGCTTCAAA<br>GTCGAAGTTT   |
| 31501 | CAATTCCAAA<br>GTTAAGGTTT | AAGCTTGAGG<br>TTCGAACCTC | TTAACCTAAG<br>AATTGGATTC | CACTGCCAAG<br>GTGACGGTTC  | GGGTTGATGT<br>CCCAACTACA   |
| 31551 | TTGACGCTAC<br>AACTGCGATG | AGCCATAGCC<br>TCGGTATCGG | ATTAATGCAG<br>TAATTACGTC | GAGATGGGCT<br>CTCTACCCGA  | TGAATTTGGT<br>ACTTAAACCA   |
| 31601 | TCACCTAATG<br>AGTGGATTAC | CACCAAACAC<br>GTGGTTTGTG | AAATCCCCTC<br>TTTAGGGGAG | AAAACAAAAA<br>TTTTGTTTTT  | TTGGCCATGG<br>AACCGGTACC   |
| 31651 | CCTAGAATTT<br>GGATCTTAAA | GATTCAAACA<br>CTAAGTTTGT | AGGCTATGGT<br>TCCGATACCA | TCCTAAACTA<br>AGGATTTGAT  | GGAAC TG GCC<br>CCTTGACCGG |
| 31701 | TTAGTTTTGA<br>AATCAAACT  | CAGCACAGGT<br>GTCGTGTCCA | GCCATTACAG<br>CGGTAATGTC | TAGGAAACAA<br>ATCCTTTGTT  | AAATAATGAT<br>TTTATTACTA   |
| 31751 | AAGCTAACTT<br>TTCGATTGAA | TGTGGACCAC<br>ACACCTGGTG | ACCAGCTCCA<br>TGGTCGAGGT | TCTCCTAACT<br>AGAGGATTGA  | GTAGACTAAA<br>CATCTGATTT   |
| 31801 | TGCAGAGAAA<br>ACGTCTCTTT | GATGCTAAAC<br>CTACGATTTG | TCACTTTGGT<br>AGTGAAACCA | CTTAACAAAA<br>GAATTGTTTT  | TGTGGCAGTC<br>ACACCGTCAG   |
| 31851 | AAATACTTGC<br>TTTATGAACG | TACAGTTTCA<br>ATGTCAAAGT | GTTTTGGCTG<br>CAAAACCGAC | TTAAAGGCAG<br>AATTTCCGTC  | TTTGGCTCCA<br>AAACCGAGGT   |
| 31901 | ATATCTGGAA<br>TATAGACCTT | CAGTTCAAAG<br>GTCAAGTTTC | TGCTCATCTT<br>ACGAGTAGAA | ATTATAAGAT<br>TAATATTCTA  | TTGACGAAAA<br>AACTGCTTTT   |
| 31951 | TGGAGTGCTA<br>ACCTCACGAT | CTAAACAATT<br>GATTGTGTTA | CCTTCCTGGA<br>GGAAGGACCT | CCCAGAAATAT<br>GGGTCTTATA | TGGAAC TTTA<br>ACCTTGAAAT  |

FIG. 10A-40

|       |                          |                          |                          |                           |                           |
|-------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| 32001 | GAAATGGAGA<br>CTTTACCTCT | TCTTACTGAA<br>AGAATGACTT | GGCACAGCCT<br>CCGTGTCGGA | ATACAAACGC<br>TATGTTTGCG  | TGTTGGATTT<br>ACAACCTAAA  |
| 32051 | ATGCCTAACC<br>TACGGATTGG | TATCAGCTTA<br>ATAGTCGAAT | TCCAAAATCT<br>AGGTTTTAGA | CACGGTAAAA<br>GTGCCATTTT  | CTGCCAAAAG<br>GACGGTTTTT  |
| 32101 | TAACATTGTC<br>ATTGTAACAG | AGTCAAGTTT<br>TCAGTTCAAA | ACTTAAACGG<br>TGAATTGACC | AGACAAAACCT<br>TCTGTTTTGA | AAACCTGTAA<br>TTTGGACATT  |
| 32151 | CACTAACCAT<br>GTGATTGGTA | TACACTAAAC<br>ATGTGATTTG | GGTACACAGG<br>CCATGTGTCC | AAACAGGAGA<br>TTTGTCTCT   | CACAACTCCA<br>GTGTTGAGGT  |
| 32201 | AGTGCATACT<br>TCACGTATGA | CTATGTCATT<br>GATACAGTAA | TTCATGGGAC<br>AAGTACCCTG | TGGTCTGGCC<br>ACCAGACCGG  | ACAACCTACAT<br>TGTTGATGTA |
| 32251 | TAATGAAATA<br>ATTACTTTAT | TTTGCCACAT<br>AAACGGTGTA | CCTCTTACAC<br>GGAGAATGTG | TTTTTCATAC<br>AAAAAGTATG  | ATTGCCCAAG<br>TAACGGGTTT  |
| 32301 | AATAAAGAAT<br>TTATTTCTTA | CGTTTGTGTT<br>GCAAACACAA | ATGTTTCAAC<br>TACAAAGTTG | GTGTTTATTT<br>CACAAATAAA  | TTCAATTGCA<br>AAGTTAACGT  |
| 32351 | GAAAATTTCA<br>CTTTTAAAGT | AGTCATTTTT<br>TCAGTAAAAA | CATTCAGTAG<br>GTAAGTCATC | TATAGCCCCA<br>ATATCGGGGT  | CCACCACATA<br>GGTGGTGTAT  |
| 32401 | GCTTATACAG<br>CGAATATGTC | ATCACCGTAC<br>TAGTGGCATG | CTTAATCAAA<br>GAATTAGTTT | CTCACAGAAC<br>GAGTGTCTTG  | CCTAGTATTC<br>GGATCATAAG  |
| 32451 | AACCTGCCAC<br>TTGGACGGTG | CTCCCTCCCA<br>GAGGGAGGGT | ACACACAGAG<br>TGTGTGTCTC | TACACAGTCC<br>ATGTGTCAGG  | TTTCTCCCCG<br>AAAGAGGGGC  |
| 32501 | GCTGGCCTTA<br>CGACCGGAAT | AAAAGCATCA<br>TTTTCGTAGT | TATCATGGGT<br>ATAGTACCCA | AACAGACATA<br>TTGTCTGTAT  | TTCTTAGGTG<br>AAGAATCCAC  |
| 32551 | TTATATTCCA<br>AATATAAGGT | CACGGTTTCC<br>GTGCCAAAGG | TGTCGAGCCA<br>ACAGCTCGGT | AACGCTCATC<br>TTGCGAGTAG  | AGTGATATTA<br>TCACTATAAT  |
| 32601 | ATAAACTCCC<br>TATTTGAGGG | CGGGCAGCTC<br>GCCCCTCGAG | ACTTAAGTTC<br>TGAATTCAAG | ATGTCGCTGT<br>TACAGCGACA  | CCAGCTGCTG<br>GGTCGACGAC  |
| 32651 | AGCCACAGGC<br>TCGGTGTCCG | TGCTGTCCAA<br>ACGACAGGTT | CTTGCGGTTG<br>GAACGCCAAC | CTTAACGGGC<br>GAATTGCCCC  | GGCGAAGGAG<br>CCGCTTCCTC  |
| 32701 | AAGTCCACGC<br>TTCAGGTGCG | CTACATGGGG<br>GATGTACCCC | GTAGAGTCAT<br>CATCTCAGTA | AATCGTG CAT<br>TTAGCACGTA | CAGGATAGGG<br>GTCCTATCCC  |
| 32751 | CGGTGGTGCT<br>GCCACCACGA | GCAGCAGCGC<br>CGTCGTCGCG | GCGAATAAAC<br>CGCTTATTTG | TGCTGCCGCC<br>ACGACGGCGG  | GCCGCTCCGT<br>CGGCGAGGCA  |

FIG. 10A-41

|       |                           |                           |                          |                          |                           |
|-------|---------------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| 32801 | CCTGCAGGAA<br>GGACGTCCTT  | TACAACATGG<br>ATGTTGTACC  | CAGTGGTCTC<br>GTCACCAGAG | CTCAGCGATG<br>GAGTCGCTAC | ATTCGCACCG<br>TAAGCGTGGC  |
| 32851 | CCCGCAGCAT<br>GGGCGTCGTA  | AAGGCGCCTT<br>TTCCGCGGAA  | GTCCTCCGGG<br>CAGGAGGCC  | CACAGCAGCG<br>GTGTCGTCGC | CACCCTGATC<br>GTGGGACTAG  |
| 32901 | TCACTTAAAT<br>AGTGAATTTA  | CAGCACAGTA<br>GTCGTGTCAT  | ACTGCAGCAC<br>TGACGTCTGT | AGCACCACAA<br>TCGTGGTGTT | TATTGTTCAA<br>ATAACAAGTT  |
| 32951 | AATCCCACAG<br>TTAGGGTGTC  | TGCAAGGCGC<br>ACGTTCCGCG  | TGTATCCAAA<br>ACATAGGTTT | GCTCATGGCG<br>CGAGTACCGC | GGGACCACAG<br>CCCTGGTGTC  |
| 33001 | AACCCACGTG<br>TTGGGTGCAC  | GCCATCATAC<br>CGGTAGTATG  | CACAAGCGCA<br>GTGTTGCGGT | GGTAGATTAA<br>CCATCTAATT | GTGGCGACCC<br>CACCGCTGGG  |
| 33051 | CTCATAAACA<br>GAGTATTTGT  | CGCTGGACAT<br>GCGACCTGTA  | AAACATTACC<br>TTTGTAATGG | TCTTTTGGCA<br>AGAAAACCGT | TGTTGTAATT<br>ACAACATTAA  |
| 33101 | CACCACCTCC<br>GTGGTGGAGG  | CGGTACCATA<br>GCCATGGTAT  | TAAACCTCTG<br>ATTTGGAGAC | ATTAAACATG<br>TAATTTGTAC | GCGCCATCCA<br>CGCGGTAGGT  |
| 33151 | CCACCATCCT<br>GGTGGTAGGA  | AAACCAGCTG<br>TTTGGTCGAC  | GCCAAAACCT<br>CGGTTTGGGA | GCCCGCCGGC<br>CGGGCGGCCG | TATACACTGC<br>ATATGTGACG  |
| 33201 | AGGGAACCGG<br>TCCCTTGGCC  | GACTGGAACA<br>CTGACCTTGT  | ATGACAGTGG<br>TACTGTCACC | AGAGCCCAGG<br>TCTCGGGTCC | ACTCGTAACC<br>TGAGCATTGG  |
| 33251 | ATGGATCATC<br>TACCTAGTAG  | ATGCTCGTCA<br>TACGAGCAGT  | TGATATCAAT<br>ACTATAGTTA | GTTGGCACAA<br>CAACCGTGTT | CACAGGCACA<br>GTGTCCGTGT  |
| 33301 | CGTGCATACA<br>GCACGTATGT  | CTTCCTCAGG<br>GAAGGAGTCC  | ATTACAAGCT<br>TAATGTTCGA | CCTCCCGCGT<br>GGAGGGCGCA | TAGAACCATA<br>ATCTTGGTAT  |
| 33351 | TCCCAGGGAA<br>AGGGTCCCTT  | CAACCCATTC<br>GTTGGGTAAG  | CTGAATCAGC<br>GACTTAGTCG | GTAAATCCCA<br>CATTTAGGGT | CACTGCAGGG<br>GTGACGTCCC  |
| 33401 | AAGACCTCGC<br>TTCTGGAGCG  | ACGTA ACTCA<br>TGCATTGAGT | CGTTGTGCAT<br>GCAACACGTA | TGTCAAAGTG<br>ACAGTTTCAC | TTACATTTCGG<br>AATGTAAGCC |
| 33451 | GCAGCAGCGG<br>CGTCGTGCGC  | ATGATCCTCC<br>TACTAGGAGG  | AGTATGGTAG<br>TCATACCATC | CGCGGGTTTC<br>GCGCCCAAAG | TGTCTCAAAA<br>ACAGAGTTTT  |
| 33501 | GGAGGTAGAC<br>CCTCCATCTG  | GATCCCTACT<br>CTAGGGATGA  | GTACGGAGTG<br>CATGCCTCAC | CGCCGAGACA<br>GCGGCTCTGT | ACCGAGATCG<br>TGGCTCTAGC  |
| 33551 | TGTTGGTTCGT<br>ACAACCAGCA | AGTGTCATGC<br>TCACAGTACG  | CAAATGGAAC<br>GTTTACCTTG | GCCGGACGTA<br>CGGCCTGCAT | GTCATATTTT<br>CAGTATAAAG  |

FIG. 10A-42

|       |                          |                          |                          |                          |                           |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| 33601 | CTGAAGCAAA<br>GACTTCGTTT | ACCAGGTGCG<br>TGGTCCACGC | GGCGTGACAA<br>CCGCACTGTT | ACAGATCTGC<br>TGTCTAGACG | GTCTCCGGTC<br>CAGAGGCCAG  |
| 33651 | TCGCCGCTTA<br>AGCGGCGAAT | GATCGCTCTG<br>CTAGCGAGAC | TGTAGTAGTT<br>ACATCATCAA | GTAGTATATC<br>CATCATATAG | CACTCTCTCA<br>GTGAGAGAGT  |
| 33701 | AAGCATCCAG<br>TTCGTAGGTC | GCGCCCCCTG<br>CGCGGGGGAC | GCTTCGGGTT<br>CGAAGCCCAA | CTATGTAAAC<br>GATACATTTG | TCCTTCATGC<br>AGGAAGTACG  |
| 33751 | GCCGCTGCCC<br>CGGCGACGGG | TGATAACATC<br>ACTATTGTAG | CACCACCGCA<br>GTGGTGGCGT | GAATAAGCCA<br>CTTATTCGGT | CACCCAGCCA<br>GTGGGTGCGT  |
| 33801 | ACCTACACAT<br>TGGATGTGTA | TCGTTCTGCG<br>AGCAAGACGC | AGTCACACAC<br>TCAGTGTGTG | GGGAGGAGCG<br>CCCTCCTCGC | GGAAGAGCTG<br>CCTTCTCGAC  |
| 33851 | GAAGAACCAT<br>CTTCTTGGTA | GTTTTTTTTT<br>CAAAAAAAAA | TTATTCCAAA<br>AATAAGGTTT | AGATTATCCA<br>TCTAATAGGT | AAACCTCAAA<br>TTTGGAGTTT  |
| 33901 | ATGAAGATCT<br>TACTTCTAGA | ATTAAGTGAA<br>TAATTCACCT | CGCGCTCCCC<br>GCGCGAGGGG | TCCGGTGGCG<br>AGGCCACCGC | TGGTCAAACCT<br>ACCAGTTTGA |
| 33951 | CTACAGCCAA<br>GATGTCGGTT | AGAACAGATA<br>TCTTGTCTAT | ATGGCATTTC<br>TACCGTAAAC | TAAGATGTTG<br>ATTCTACAAC | CACAATGGCT<br>GTGTTACCGA  |
| 34001 | TCCAAAAGGC<br>AGGTTTTCCG | AAACGGCCCT<br>TTTGCCGGGA | CACGTCCAAG<br>GTGCAGGTTT | TGGACGTAAA<br>ACCTGCATTT | GGCTAAACCC<br>CCGATTTGGG  |
| 34051 | TTCAGGGTGA<br>AAGTCCCACT | ATCTCCTCTA<br>TAGAGGAGAT | TAAACATTCC<br>ATTTGTAAGG | AGCACCTTCA<br>TCGTGGAAGT | ACCATGCCCA<br>TGGTACGGGT  |
| 34101 | AATAATTCTC<br>TTATTAAGAG | ATCTCGCCAC<br>TAGAGCGGTG | CTTCTCAATA<br>GAAGAGTTAT | TATCTCTAAG<br>ATAGAGATTC | CAAATCCCGA<br>GTTTAGGGCT  |
| 34151 | ATATTAAGTC<br>TATAATTACG | CGGCCATTGT<br>GCCGGTAACA | AAAAATCTGC<br>TTTTTAGACG | TCCAGAGCGC<br>AGGTCTCGCG | CCTCCACCTT<br>GGAGGTGGAA  |
| 34201 | CAGCCTCAAG<br>GTCGGAGTTC | CAGCGAATCA<br>GTCGCTTAGT | TGATTGCAAA<br>ACTAACGTTT | AATTCAGGTT<br>TTAAGTCCAA | CCTCACAGAC<br>GGAGTGTCTG  |
| 34251 | CTGTATAAGA<br>GACATATTCT | TTCAAAAGCG<br>AAGTTTTTCG | GAACATTAAC<br>CTTGTAATTG | AAAAATACCG<br>TTTTTATGGC | CGATCCCGTA<br>GCTAGGGCAT  |
| 34301 | GGTCCCTTCG<br>CCAGGGAAGC | CAGGGCCAGC<br>GTCCCGGTCT | TGAACATAAT<br>ACTTGTATTA | CGTGCAGGTC<br>GCACGTCCAG | TGCACGGACC<br>ACGTGCCTGG  |
| 34351 | AGCGCGGCCA<br>TCGCGCCGGT | CTTCCCCGCC<br>GAAGGGGCGG | AGGAACCATG<br>TCCTTGGTAC | ACAAAAGAAC<br>TGTTTTCTTG | CCACACTGAT<br>GGTGTGACTA  |

FIG. 10A-43

|       |                           |                           |                          |                           |                           |
|-------|---------------------------|---------------------------|--------------------------|---------------------------|---------------------------|
| 34401 | TATGACACGC<br>ATACTGTGCG  | ATACTCGGAG<br>TATGAGCCTC  | CTATGCTAAC<br>GATACGATTG | CAGCGTAGCC<br>GTCGCATCGG  | CCGATGTAAG<br>GGCTACATTC  |
| 34451 | CTTGTTGCAT<br>GAACAACGTA  | GGGCGGCGAT<br>CCCGCCGCTA  | ATAAAATGCA<br>TATTTTACGT | AGGTGCTGCT<br>TCCACGACGA  | CAAAAAATCA<br>GTTTTTTAGT  |
| 34501 | GGCAAAGCCT<br>CCGTTTCGGA  | CGCGCAAAAA<br>GCGCGTTTTT  | AGAAAGCACA<br>TCTTTCGTGT | TCGTAGTCAT<br>AGCATCAGTA  | GCTCATGCAG<br>CGAGTACGTC  |
| 34551 | ATAAAGGCAG<br>TATTTCCGTC  | GTAAGCTCCG<br>CATTCGAGGC  | GAACCACCAC<br>CTTGGTGGTG | AGAAAAAGAC<br>TCTTTTTCTG  | ACCATTTTTTC<br>TGGTAAAAAG |
| 34601 | TCTCAAACAT<br>AGAGTTTGTA  | GTCTGCGGGT<br>CAGACGCCCA  | TTCTGCATAA<br>AAGACGTATT | ACACAAAATA<br>TGTGTTTTAT  | AAATAACAAA<br>TTTATTGTTT  |
| 34651 | AAAACATTTA<br>TTTTGTAAAT  | AACATTAGAA<br>TTGTAATCTT  | GCCTGTCTTA<br>CGGACAGAAT | CAACAGGAAA<br>GTTGTCCTTT  | AACAACCCTT<br>TTGTTGGGAA  |
| 34701 | ATAAGCATAA<br>TATTCGTATT  | GACGGACTAC<br>CTGCCTGATG  | GGCCATGCCG<br>CCGGTACGGC | GCGTGACCGT<br>CGCACTGGCA  | AAAAAACTG<br>TTTTTTTTGAC  |
| 34751 | GTCACCGTGA<br>CAGTGGCACT  | TTAAAAAGCA<br>AATTTTTTCGT | CCACCGACAG<br>GGTGGCTGTC | CTCCTCGGTC<br>GAGGAGCCAG  | ATGTCCGGAG<br>TACAGGCCTC  |
| 34801 | TCATAATGTA<br>AGTATTACAT  | AGACTCGGTA<br>TCTGAGCCAT  | AACACATCAG<br>TTGTGTAGTC | GTTGATTCAC<br>CAACTAAGTG  | ATCGGTCAGT<br>TAGCCAGTCA  |
| 34851 | GCTAAAAAGC<br>CGATTTTTTCG | GACCGAAATA<br>CTGGCTTTAT  | GCCCGGGGGA<br>CGGGCCCCCT | ATACATACCC<br>TATGTATGGG  | GCAGGCGTAG<br>CGTCCGCATC  |
| 34901 | AGACAACATT<br>TCTGTTGTAA  | ACAGCCCCCA<br>TGTCGGGGGT  | TAGGAGGTAT<br>ATCCTCCATA | AACAAAATTA<br>TTGTTTTAAT  | ATAGGAGAGA<br>TATCCTCTCT  |
| 34951 | AAAACACATA<br>TTTTGTGTAT  | AACACCTGAA<br>TTGTGGACTT  | AAACCCTCCT<br>TTTGGGAGGA | GCCTAGGCAA<br>CGGATCCGTT  | AATAGCACCC<br>TTATCGTGGG  |
| 35001 | TCCCGCTCCA<br>AGGGCGAGGT  | GAACAACATA<br>CTTGTTGTAT  | CAGCGCTTCC<br>GTCGCGAAGG | ACAGCGGCAG<br>TGTCGCCGTC  | CCATAACAGT<br>GGTATTGTCA  |
| 35051 | CAGCCTTACC<br>GTCGGAATGG  | AGTAAAAAAG<br>TCATTTTTTC  | AAAACCTATT<br>TTTTGGATAA | AAAAAAACAC<br>TTTTTTTTGTG | CACTCGACAC<br>GTGAGCTGTG  |
| 35101 | GGCACCAGCT<br>CCGTGGTCGA  | CAATCAGTCA<br>GTTAGTCAGT  | CAGTGTAATA<br>GTCACATTTT | AAGGGCCAAG<br>TTCCCGGTTC  | TGCAGAGCGA<br>ACGTCTCGCT  |
| 35151 | GTATATATAG<br>CATATATATC  | GACTAAAAAA<br>CTGATTTTTT  | TGACGTAACG<br>ACTGCATTGC | GTTAAAGTCC<br>CAATTTCAGG  | ACAAAAAACA<br>TGTTTTTTGT  |

FIG. 10A-44

|       |            |            |            |            |            |
|-------|------------|------------|------------|------------|------------|
| 35201 | CCCAGAAAAC | CGCACGCGAA | CCTACGCCCA | GAAACGAAAG | CCAAAAAACC |
|       | GGGTCTTTTG | GCGTGCGCTT | GGATGCGGGT | CTTTGCTTTC | GGTTTTTTTG |
| 35251 | CACAACTTCC | TCAAATCGTC | ACTTCCGTTT | TCCCACGTTA | CGTCACTTCC |
|       | GTGTTGAAGG | AGTTTAGCAG | TGAAGGCAAA | AGGGTGCAAT | GCAGTGAAGG |
| 35301 | CATTTTAAGA | AAACTACAAT | TCCCAACACA | TACAAGTTAC | TCCGCCCTAA |
|       | GTAAAATTCT | TTTGATGTTA | AGGGTTGTGT | ATGTTCAATG | AGGCGGGATT |
| 35351 | AACCTACGTC | ACCCGCCCCG | TTCCCACGCC | CCGCGCCACG | TCACAAACTC |
|       | TTGGATGCAG | TGGGCGGGGC | AAGGGTGCGG | GGCGCGGTGC | AGTGTTTGAG |
| 35401 | CACCCCTCA  | TTATCATATT | GGCTTCAATC | CAAAATAAGG | TATATTATTG |
|       | GTGGGGGAGT | AATAGTATAA | CCGAAGTTAG | GTTTTATTCC | ATATAATAAC |
|       | PacI       |            |            |            |            |
|       | ~~~~~      |            |            |            |            |
| 35451 | ATGATGTTAA | TTAAGAATTC | GGATCTGCGA | CGCGAGGCTG | GATGGCCTTC |
|       | TACTACAATT | AATTCCTAAG | CCTAGACGCT | GCGCTCCGAC | CTACCGGAAG |
| 35501 | CCCATTATGA | TTCTTCTCGC | TTCCGGCGGC | ATCGGGATGC | CCGCGTTGCA |
|       | GGGTAATACT | AAGAAGAGCG | AAGGCCGCCG | TAGCCCTACG | GGCGCAACGT |
| 35551 | GGCCATGCTG | TCCAGGCAGG | TAGATGACGA | CCATCAGGGA | CAGCTTCAAG |
|       | CCGGTACGAC | AGGTCCGTCC | ATCTACTGCT | GGTAGTCCCT | GTCGAAGTTC |
| 35601 | GCCAGCAAAA | GGCCAGGAAC | CGTAAAAAGG | CCGCGTTGCT | GGCGTTTTTC |
|       | CGGTCGTTTT | CCGGTCCTTG | GCATTTTTTC | GGCGCAACGA | CCGCAAAAAG |
| 35651 | CATAGGCTCC | GCCCCCTGA  | CGAGCATCAC | AAAAATCGAC | GCTCAAGTCA |
|       | GTATCCGAGG | CGGGGGGACT | GCTCGTAGTG | TTTTTAGCTG | CGAGTTCAGT |
| 35701 | GAGGTGGCGA | AACCCGACAG | GACTATAAAG | ATACCAGGCG | TTTCCCCCTG |
|       | CTCCACCGCT | TTGGGCTGTC | CTGATATTTT | TATGGTCCGC | AAAGGGGGAC |
| 35751 | GAAGCTCCCT | CGTGCGCTCT | CCTGTTCCGA | CCCTGCCGCT | TACCGGATAC |
|       | CTTCGAGGGA | GCACGCGAGA | GGACAAGGCT | GGGACGGCGA | ATGGCCTATG |
| 35801 | CTGTCCGCCT | TTCTCCCTTC | GGGAAGCGTG | GCGCTTTCTC | ATAGCTCACG |
|       | GACAGGCGGA | AAGAGGGAAG | CCCTTCGCAC | CGCGAAAGAG | TATCGAGTGC |
| 35851 | CTGTAGGTAT | CTCAGTTCGG | TGTAGGTCGT | TCGCTCCAAG | CTGGGCTGTG |
|       | GACATCCATA | GAGTCAAGCC | ACATCCAGCA | AGCGAGGTTC | GACCCGACAC |
| 35901 | TGCACGAACC | CCCCGTTTCA | CCCGACCGCT | GCGCCTTATC | CGGTAAGTAT |
|       | ACGTGCTTGG | GGGGCAAGTC | GGGCTGGCGA | CGCGGAATAG | GCCATTGATA |

FIG. 10A-45

|       |                          |                          |                          |                          |                          |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 35951 | CGTCTTGAGT<br>GCAGAACTCA | CCAACCCGGT<br>GGTTGGGCCA | AAGACACGAC<br>TTCTGTGCTG | TTATCGCCAC<br>AATAGCGGTG | TGGCAGCAGC<br>ACCGTCGTCG |
| 36001 | CACTGGTAAC<br>GTGACCATTG | AGGATTAGCA<br>TCCTAATCGT | GAGCGAGGTA<br>CTCGCTCCAT | TGTAGGCGGT<br>ACATCCGCCA | GCTACAGAGT<br>CGATGTCTCA |
| 36051 | TCTTGAAGTG<br>AGAACTTCAC | GTGGCCTAAC<br>CACCGGATTG | TACGGCTACA<br>ATGCCGATGT | CTAGAAGGAC<br>GATCTTCCTG | AGTATTTGGT<br>TCATAAACCA |
| 36101 | ATCTGCGCTC<br>TAGACGCGAG | TGCTGAAGCC<br>ACGACTTCGG | AGTTACCTTC<br>TCAATGGAAG | GGAAAAAGAG<br>CCTTTTTCTC | TTGGTAGCTC<br>AACCATCGAG |
| 36151 | TTGATCCGGC<br>AACTAGGCCG | AAACAAACCA<br>TTTGTTTGGT | CCGCTGGTAG<br>GGCGACCATC | CGGTGGTTTT<br>GCCACCAAAA | TTTGTTTGCA<br>AAACAAACGT |
| 36201 | AGCAGCAGAT<br>TCGTCGTCTA | TACGCGCAGA<br>ATGCGCGTCT | AAAAAAGGAT<br>TTTTTTCCTA | CTCAAGAAGA<br>GAGTTCTTCT | TCCTTTGATC<br>AGGAAACTAG |
| 36251 | TTTTCTACGG<br>AAAAGATGCC | GGTCTGACGC<br>CCAGACTGCG | TCAGTGGAAC<br>AGTCACCTTG | GAAAACTCAC<br>CTTTTGAGTG | GTTAAGGGAT<br>CAATTCCTTA |
| 36301 | TTTGGTCATG<br>AAACCAGTAC | AGATTATCAA<br>TCTAATAGTT | AAAGGATCTT<br>TTTCCTAGAA | CACCTAGATC<br>GTGGATCTAG | CTTTTAAATC<br>GAAAATTTAG |
| 36351 | AATCTAAAGT<br>TTAGATTTCA | ATATATGAGT<br>TATATACTCA | AAACTTGGTC<br>TTTGAACCAG | TGACAGTTAC<br>ACTGTCAATG | CAATGCTTAA<br>GTTACGAATT |
| 36401 | TCAGTGAGGC<br>AGTCACTCCG | ACCTATCTCA<br>TGGATAGAGT | GCGATCTGTC<br>CGCTAGACAG | TATTTTCGTT<br>ATAAAGCAAG | ATCCATAGTT<br>TAGGTATCAA |
| 36451 | GCCTGACTCC<br>CGGACTGAGG | CCGTCGTGTA<br>GGCAGCACAT | GATAACTACG<br>CTATTGATGC | ATACGGGAGG<br>TATGCCCTCC | GCTTACCATC<br>CGAATGGTAG |
| 36501 | TGGCCCCAGT<br>ACCGGGGTCA | GCTGCAATGA<br>CGACGTTACT | TACCGCGAGA<br>ATGGCGCTCT | CCCACGCTCA<br>GGGTGCGAGT | CCGGCTCCAG<br>GGCCGAGGTC |
| 36551 | ATTTATCAGC<br>TAAATAGTCG | AATAAACCAG<br>TTATTTGGTC | CCAGCCGGAA<br>GGTCGGCCTT | GGGCCGAGCG<br>CCCGGCTCGC | CAGAAGTGGT<br>GTCTTCACCA |
| 36601 | CCTGCAACTT<br>GGACGTTGAA | TATCCGCCTC<br>ATAGGCGGAG | CATCCAGTCT<br>GTAGGTCAGA | ATTAATTGTT<br>TAATTAACAA | GCCGGGAAGC<br>CGGCCCTTCG |
| 36651 | TAGAGTAAGT<br>ATCTCATTCA | AGTTCGCCAG<br>TCAAGCGGTC | TTAATAGTTT<br>AATTATCAAA | GCGCAACGTT<br>CGCGTTGCAA | GTTGCCATTG<br>CAACGGTAAC |
| 36701 | CTACAGGCAT<br>GATGTCCGTA | CGTGGTGTCA<br>GCACCACAGT | CGCTCGTCGT<br>GCGAGCAGCA | TTGGTATGGC<br>AACCATACCG | TTCATTCAGC<br>AAGTAAGTCG |

FIG. 10A-46

|       |                          |                          |                           |                           |                           |
|-------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 36751 | TCCGGTCCC<br>AGGCCAAGG   | AACGATCAAG<br>TTGCTAGTC  | GCGAGTTACA<br>CGCTCAATGT  | TGATCCCCCA<br>ACTAGGGGGT  | TGTTGTGCAA<br>ACAACACGTT  |
| 36801 | AAAAGCGGTT<br>TTTTCGCCAA | AGCTCCTTCG<br>TCGAGGAAGC | GTCCTCCGAT<br>CAGGAGGCTA  | CGTTGTCAGA<br>GCAACAGTCT  | AGTAAGTTGG<br>TCATTCAACC  |
| 36851 | CCGCAGTGTT<br>GGCGTCACAA | ATCACTCATG<br>TAGTGAGTAC | GTTATGGCAG<br>CAATACCGTC  | CACTGCATAA<br>GTGACGTATT  | TTCTCTTACT<br>AAGAGAATGA  |
| 36901 | GTCATGCCAT<br>CAGTACGGTA | CCGTAAGATG<br>GGCATTCTAC | CTTTTCTGTG<br>GAAAAGACAC  | ACTGGTGAGT<br>TGACCACTCA  | ACTCAACCAA<br>TGAGTTGGTT  |
| 36951 | GTCATTCTGA<br>CAGTAAGACT | GAATAGTGTA<br>CTTATCACAT | TGCGGCGACC<br>ACGCCGCTGG  | GAGTTGCTCT<br>CTCAACGAGA  | TGCCCCGGCGT<br>ACGGGCCGCA |
| 37001 | CAACACGGGA<br>GTTGTGCCCT | TAATACCGCG<br>ATTATGGCGC | CCACATAGCA<br>GGTGTATCGT  | GAACTTTAAA<br>CTTGAAATTT  | AGTGCTCATC<br>TCACGAGTAG  |
| 37051 | ATTGGAAAAC<br>TAACCTTTTG | GTTCTTCGGG<br>CAAGAAGCCC | GCGAAAACCTC<br>CGCTTTTGAG | TCAAGGATCT<br>AGTTCCTAGA  | TACCGCTGTT<br>ATGGCGACAA  |
| 37101 | GAGATCCAGT<br>CTCTAGGTCA | TCGATGTAAC<br>AGCTACATTG | CCACTCGTGC<br>GGTGAGCACG  | ACCCAACCTGA<br>TGGGTTGACT | TCTTCAGCAT<br>AGAAGTCGTA  |
| 37151 | CTTTTACTTT<br>GAAAATGAAA | CACCAGCGTT<br>GTGGTCGCAA | TCTGGGTGAG<br>AGACCCACTC  | CAAAAACAGG<br>GTTTTTGTCC  | AAGGCAAAAT<br>TTCCGTTTTA  |
| 37201 | GCCGCAAAAA<br>CGGCGTTTTT | AGGGAATAAG<br>TCCCTTATTC | GGCGACACGG<br>CCGCTGTGCC  | AAATGTTGAA<br>TTTACAACCT  | TACTCATACT<br>ATGAGTATGA  |
| 37251 | CTTCCTTTTT<br>GAAGGAAAAA | CAATATTATT<br>GTTATAATAA | GAAGCATTTA<br>CTTCGTAAAT  | TCAGGGTTAT<br>AGTCCCAATA  | TGTCTCATGA<br>ACAGAGTACT  |
| 37301 | GCGGATACAT<br>CGCCTATGTA | ATTTGAATGT<br>TAAACTTACA | ATTTAGAAAA<br>TAAATCTTTT  | ATAAACAAAT<br>TATTTGTTTA  | AGGGGTTCCG<br>TCCCCAAGGC  |
| 37351 | CGCACATTTT<br>GCGTGTAAG  | CCCGAAAAGT<br>GGGCTTTTCA | GCCACCTGAC<br>CGGTGGACTG  | GTCTAAGAAA<br>CAGATTCTTT  | CCATTATTAT<br>GGTAATAATA  |
| 37401 | CATGACATTA<br>GTACTGTAAT | ACCTATAAAA<br>TGGATATTTT | ATAGGCGTAT<br>TATCCGCATA  | CACGAGGCCC<br>GTGCTCCGGG  | TTTCGTCTTC<br>AAAGCAGAAG  |
| 37451 | AAGAATTGGA<br>TTCTTAACCT | TCCGAATTCT<br>AGGCTTAAGA | TAAT<br>ATTA              |                           |                           |

FIG. 10A-47



|      |             |             |             |             |             |             |
|------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1    | catcatcaat  | aatatacctt  | atagatggaa  | tgggtgccaa  | atgtaaata   | ggtgatttta  |
| 61   | aaaagtgtgg  | gccgtgtggt  | gattggctgt  | gggggttaacg | gttaaaaggg  | gcccgcgggc  |
| 121  | cgtgggaaaa  | tgacgtttta  | tgggggtgga  | gttttttttgc | aagttgtcgc  | gggaaatgtt  |
| 181  | acgcataaaa  | aggcttcttt  | tctcacggaa  | ctacttagtt  | ttcccacggt  | atttaacagg  |
| 241  | aaatgaggta  | gttttgaccg  | gatgcaagt   | aaaattgctg  | attttcgcgc  | gaaaactgaa  |
| 301  | tgaggaagt   | tttttctgaa  | taatgtggta  | tttatggcag  | ggtggagtat  | ttgttcaggg  |
| 361  | ccaggtagac  | tttgacccat  | tacgtggagg  | tttcgattac  | cgtgtttttt  | acctgaattt  |
| 421  | ccgcgtaccg  | tgcaaaagtc  | ttctgttttt  | acgtaggtgt  | cagctgatcg  | ctagggattt  |
| 481  | tatacctcag  | ggtttgtgtc  | aagaggccac  | tcttgagtgc  | cagcgagaag  | agttttctcc  |
| 541  | tctgcgccgg  | cagtttaata  | ataaaaaaat  | gagagatttg  | cgatttctgc  | ctcaggaaat  |
| 601  | aatctctgct  | gagactggaa  | atgaaatatt  | ggagcttggt  | gtgcacgccc  | tgatgggaga  |
| 661  | cgatccggag  | ccacctgtgc  | agcttttttg  | gcctcctacg  | cttcaggaac  | tgtatgattt  |
| 721  | agaggtagag  | ggatcggagg  | attctaata   | ggaagctgtg  | aatggctttt  | ttaccgattt  |
| 781  | tatgctttta  | gctgctaatt  | aaggattaga  | attagatccg  | cctttggaca  | ctttcaatac  |
| 841  | tccaggggtg  | attgtggaaa  | gcggtacagg  | tgtaaagaaa  | ttacctgatt  | tgagttccgt  |
| 901  | ggactgtgat  | ttgcactgct  | atgaagacgg  | gtttcctccg  | agtgatgagg  | aggaccatga  |
| 961  | aaaggagcag  | tccatgcaga  | ctgcagcggg  | tgagggagtg  | aaggctgcc   | atgttggttt  |
| 1021 | tcagttggat  | tgcccggagc  | ttctggacat  | ggctgtaagt  | cttgtaatt   | tcacaggaaa  |
| 1081 | aatactggag  | taaaggaact  | gttatgttcg  | cttttggtat  | atgaaaacc   | attgccactt  |
| 1141 | tattttcagt  | aaagtgtgtt  | taagttaaaa  | tttaaaggaa  | tatgctgttt  | ttcacatgta  |
| 1201 | tattgagtgt  | gagttttgtg  | cttcttatta  | taagtctgt   | gtctgatgct  | gatgaatcac  |
| 1261 | catctcctga  | ttctactacc  | tcacctcctg  | atattcaagc  | acctgttctt  | gtggacgtgc  |
| 1321 | gcaagcccat  | tcctgtgaag  | cttaagcctg  | ggaaacgtcc  | agcagtggag  | aaacttgagg  |
| 1381 | acttgttaca  | gggtggggac  | ggaccttttg  | acttgagtac  | acggaaacgt  | ccaagacaat  |
| 1441 | aagtgttcca  | tatccgtgtt  | tacttaaggt  | gacgtcaata  | tttgtgtgag  | atgccaatgt  |
| 1501 | aataaaaaata | tgtaactgt   | tcactggttt  | ttattgcttt  | ttgggcgggg  | actcaggtat  |
| 1561 | ataagtagaa  | gcagacctgt  | gtgggttagct | cataggagct  | ggctttcatc  | catggagggt  |
| 1621 | tgggccattt  | tggaagacct  | taggaagact  | aggcaactgt  | tagagagcgc  | ttcggacgga  |
| 1681 | gtctccgggt  | tttgagagatt | ctgggttcgct | agtgaattag  | ctagggtagt  | ttttaggata  |
| 1741 | aaacaggact  | ataaacaaga  | atttgaataa  | ttgttggtag  | attgccagg   | atttttgaa   |
| 1801 | gctcttaatt  | tgggccatca  | gggttcaact  | aaagaaaaag  | ttttatcagt  | tttagacttt  |
| 1861 | tcaaccccag  | gtagaactgc  | tgctgctgtg  | gcttttctta  | cttttatatt  | agataaatgg  |
| 1921 | atccccgaga  | ctcatttcag  | caggggatac  | gttttggtat  | tcatagccac  | agcattgtgg  |
| 1981 | agaacatgga  | aggttcgcga  | gatgaggaca  | atcttaggtt  | actggccagt  | gcagcctttg  |
| 2041 | ggtgtagcgg  | gaatcctgag  | gcattccacc  | gtcatgccag  | cggttctgga  | ggaggaacag  |
| 2101 | caacagcaga  | acccgagagc  | cggcctggag  | cctccagtgg  | aggaggcga   | agggtccgtc  |
| 2161 | tgtctcctga  | actgcaacgg  | gtgcttactg  | gatctacgtc  | cactggacgg  | gataggggag  |
| 2221 | ttaagaggga  | gagggcatcc  | agtgggtact  | atgctagatc  | tgagttggct  | ttaagtttaa  |
| 2281 | tgagtcgcag  | acgtcctgaa  | accatttggt  | ggcatgaggt  | tcagaaagag  | ggaagggatg  |
| 2341 | aagtttctgt  | attgcaggag  | aaatattcac  | tggaacaggt  | gaaaacatgt  | tggttgaggc  |
| 2401 | caagagatga  | ttgggagggt  | gccattaaaa  | attatgcaa   | gatagctttg  | aggccttgata |
| 2461 | aacagataaa  | gatcagtaga  | cggattaata  | tcgggaatgc  | ttgttacata  | ttcggaatg   |
| 2521 | gggctgaggt  | ggtaatagat  | actcaagaca  | agacagttat  | tagatgctgc  | atgatggata  |
| 2581 | tgtggcctgg  | agtagtcggt  | atggaagcag  | tcacttttgt  | aaatgttaag  | tttaggggag  |
| 2641 | atgggtataa  | tggaatagtg  | tttatggcca  | ataccaaact  | tatattgcat  | ggttgtagct  |
| 2701 | tttttggttt  | caacaatacc  | tgtgtagatg  | cctggggaca  | ggttagtgta  | cgggggtgta  |
| 2761 | gtttctatgc  | gtgttggtat  | gccacagctg  | gcagaaccaa  | gagtcaattg  | tctctgaaga  |
| 2821 | aatgcataat  | ccaaagatgt  | aacctgggca  | ttctgaatga  | aggcgaagca  | agggtccgtc  |
| 2881 | actgcgcttc  | tacagatact  | ggatgtttta  | ttttaattaa  | gggaaatgcc  | agcgtaaagc  |
| 2941 | ataacatgat  | ttgtgggtgt  | tccgatgaga  | ggccttatca  | aatgctcact  | tgtgctgggtg |
| 3001 | ggcattgtaa  | tatgctggct  | actgtgcata  | ttgtttccca  | tcaacgcaaa  | aatggcctg   |
| 3061 | tttttgatca  | caatgtgttg  | accaagtgc   | ccatgcattg  | aggtgggctg  | agaggaatgt  |
| 3121 | ttatgcctta  | ccagtgtaac  | atgaatcatg  | tgaagtggtt  | gttggaacca  | gttgcttttt  |
| 3181 | ccagaatgag  | cctaacagga  | atctttgaca  | tgaacacgca  | aatctgggaag | atcctgaggt  |
| 3241 | atgatgatac  | gagatcgagg  | gtgcgcgcac  | gcgaatgcgg  | aggcaagcat  | gccagggttc  |
| 3301 | agccgggtgtg | tgtagatgtg  | accgaagatc  | tcagaccgga  | tcatttggtt  | attgcccgca  |
| 3361 | ctggagcaga  | gttcggatcc  | agtggagaag  | aaactgacta  | aggtgagtat  | tgggaaaact  |
| 3421 | ttgggggtggg | atttttcagat | ggacagattg  | agtaaaaaat  | tgttttttct  | gtcttgagc   |
| 3481 | tgacatgagt  | ggaaatgctt  | cttttaaggg  | gggagtcctc  | agcccttacc  | tgacaggcgc  |
| 3541 | tctcccatcc  | tgggcaggag  | ttcgtcagaa  | tgttatggga  | tctactgttg  | attggaagacc |
| 3601 | cgttcaaccc  | gccaatctct  | caacgctgac  | ctatgctact  | ttaagttctt  | cacctttgga  |
| 3661 | cgcagctgca  | gccgctgccc  | cgcctctgt   | cgcgctaacc  | actgtgcttg  | gaatgggtta  |

FIG. 11A-1

|      |             |             |             |             |            |            |
|------|-------------|-------------|-------------|-------------|------------|------------|
| 3721 | ctatggaagc  | atcgtgggcta | attccacttc  | ctctaataac  | ccttctacac | tgactcagga |
| 3781 | caagttactt  | gtccttttgg  | cccagctgga  | ggctttgacc  | caacgtctgg | gtgaactttc |
| 3841 | tcagcaggtg  | gccgagttgc  | gagtacaaac  | tgagtctgct  | gtcggcacgg | caaagtctaa |
| 3901 | ataaaaaaaaa | ttccagaatc  | aatgaataaa  | taaacgagct  | tgttgttgat | ttaaaatcaa |
| 3961 | gtgtttttat  | ttcatttttc  | gcgcacggta  | tgccctggac  | caccgatctc | gatcattgag |
| 4021 | aactcgggtg  | attttttcca  | gaatcctata  | gaggtgggat  | tgaatgttta | gatacatggg |
| 4081 | cattaggccg  | tctttggggg  | ggagatagct  | ccattgaagg  | gattcatgct | ccggggtagt |
| 4141 | gttgtaaatc  | accagtcac   | aacaaggctg  | cagtgcattg  | tgttgcacaa | tatcttttag |
| 4201 | aagtaggctg  | attgccacag  | ataagccctt  | ggtgtagggt  | tttacaacc  | ggttgagctg |
| 4261 | ggaggggtgc  | attcgaggtg  | aaattatgtg  | cattttggat  | tggattttta | agttggcaat |
| 4321 | attgccgcca  | agatcccgtc  | ttgggttcat  | gttatgaagg  | actaccaaga | cgggtgatcc |
| 4381 | ggtacattta  | ggaaatttat  | cgtgcagctt  | ggatggaaaa  | gcgtggaaaa | atttggagac |
| 4441 | acccttgtgt  | cctccgagat  | tttccatgca  | ctcatccatg  | ataatgcaa  | tggggcctgt |
| 4501 | ggcagcggcg  | cgggcaaaca  | cgttccgtgg  | gtctgacaca  | tcatagttat | gttcctgagt |
| 4561 | taaatcatca  | taagccattt  | taatgaattt  | ggggcggagc  | gtaccagatt | ggggtatgaa |
| 4621 | tgttccttcg  | ggccccggag  | catagttccc  | ctcacagatt  | tgcatttccc | aagctttcag |
| 4681 | ttctgagggg  | ggaatcatgt  | ccacctgggg  | ggctatgaag  | aacaccgttt | cgggggagg  |
| 4741 | ggtgattagt  | tgggatgata  | gcaagtttct  | gagcaattga  | gatttgccac | atccggtggg |
| 4801 | gccataaata  | attccgatta  | caggtttgcag | gtggtagttt  | agggaacggc | aactgccgtc |
| 4861 | ttctcgaagc  | aagggggcca  | cctcgttcat  | catttccctt  | acatgcata  | tttccgcac  |
| 4921 | caaatccatt  | aggaggcgct  | ctcctcctag  | tgatagaagt  | tcttgtagt  | aggaaaagt  |
| 4981 | tttcagcggg  | tttagaccgt  | cagccatggg  | cattttggaa  | agagtttgct | gcaaaagttc |
| 5041 | tagtctgttc  | cacagtccag  | tgatgtgttc  | tatggcatct  | cgatccagca | gacctctc   |
| 5101 | tttcgcgggt  | ttggacggct  | cctggagtag  | ggatgagac   | gatgggcgtc | cagcgctgcc |
| 5161 | aggggttcgt  | ccttcagggt  | tctcagtggt  | cgagtcagg   | ttgtttccgt | cacagtgaag |
| 5221 | gggtgtgcgc  | ctgcttgggc  | gcttgccagg  | gtgcgcttca  | gactcattct | gctggtggag |
| 5281 | aacttctgtc  | gcttgccgcc  | ctgtatgtcg  | gccaaagtag  | agtttaccat | gagttcgtag |
| 5341 | ttgagcgcct  | cggctgcgtg  | gcctttggcg  | cggagcttac  | ccttggaagt | tttcttgc   |
| 5401 | accgggcagt  | ataggcattt  | cagcgcatac  | agcttggg    | caaggaaaa  | ggattctggg |
| 5461 | gagtatgcat  | ccgcgcgcga  | ggaggcgcaa  | acagtttcac  | attccaccag | ccaggttaaa |
| 5521 | tccggttcat  | tgggtcmeta  | aacaagtttt  | ccgccatatt  | ttttgatg   | tttcttacc  |
| 5581 | ttggtctcca  | taagttcgtg  | tcctcgttga  | gtgacaaaca  | ggctgtccgt | atctccgtag |
| 5641 | actgatttta  | caggcctctt  | ctccagtggg  | gtgcctcggt  | cttcttcgta | caggaactct |
| 5701 | gaccactctg  | atacaaaggc  | gcgcgctccg  | gccagcacaa  | aggaggctat | gtgggagggg |
| 5761 | tagcgatcgt  | tgtcaaccag  | ggggtccacc  | ttttccaaag  | tatgcaaaac | catgtcacc  |
| 5821 | tcttcaacat  | ccaggaatgt  | gattggcttg  | taggtgtatt  | tcaggtgacc | tcgggtcccc |
| 5881 | gctggggggg  | tataaaagg   | ggcggttctt  | tgctcttctt  | cactgtcttc | cggatcgctg |
| 5941 | tccaggaacg  | tcagctgttg  | gggtaggtat  | tcctctctga  | aggcgggcat | gacctctgca |
| 6001 | ctcaggttgt  | cagtttctaa  | gaacgaggag  | gatttgatat  | tgacagtgc  | ggttgagatg |
| 6061 | cctttcatga  | ggttttctgc  | catttggtca  | gaaaacacaa  | tttttttatt | gtcaagtttg |
| 6121 | gtggcaaatg  | atccatacag  | ggcgttggat  | aaaagtttgg  | caatggatcg | catggtttgg |
| 6181 | ttcttttctt  | tgtccgcgcg  | ctctttggcg  | gcgatgttga  | gttgacata  | ctcgcgtgcc |
| 6241 | aggcacttcc  | attcggggaa  | gatagttggt  | aattcatctg  | gcacgattct | cacttgccac |
| 6301 | cctcgattat  | gcaaggtaat  | taaatccaca  | ctgggtggcca | cctcgcctcg | aaggggttca |
| 6361 | ttggtccaac  | agagcctacc  | tcctttccta  | gaacagaaag  | ggggaagtgg | gtctagcata |
| 6421 | agttcatcgg  | gaggttctgc  | atccatggta  | aagattcccc  | gaagtaaatc | cttatcaaaa |
| 6481 | tagctgatgg  | gagtggggtc  | atctaaggcc  | atttgccatt  | ctcgagctgc | cagtgcgcgc |
| 6541 | tcatatgggt  | taaggggact  | gccccagggc  | atgggatggg  | tgagagcaga | ggcatacatg |
| 6601 | ccacagatgt  | catagacgta  | gatgggatcc  | tcaaagatgc  | ctatgtaggt | tggatagcat |
| 6661 | cgccccctc   | tgatacttgc  | tcgcacatag  | tcataatggt  | catgtgatgg | cgtagcagc  |
| 6721 | cccggaccga  | agttgggtgc  | attgggtttt  | tctgttctgt  | agacgatctg | gcgaaagatg |
| 6781 | gcgtgagaat  | tggaagagat  | ggtgggtctt  | tgaaaaatgt  | tgaatggggc | atgaggtaga |
| 6841 | cctacagagt  | ctctgacaaa  | gtgggcataa  | gattcttgaa  | gcttgggtac | cagttcggcg |
| 6901 | gtgacaagta  | cgtctagggc  | gcagtatgca  | agtgtttctt  | gaatgatgtc | ataacctggg |
| 6961 | tggtttttct  | tttccacag   | ttcgcgggtg  | agaagggtatt | cttcgcgatc | cttccagtag |
| 7021 | tcttctagcg  | gaaaccgcgc  | tttgtctgca  | cggtaagatc  | ctagcatgta | gaactgatta |
| 7081 | actgccttgt  | aagggcagca  | gcccttctct  | acgggtagag  | agtatgcttg | agcagctttt |
| 7141 | cgtagcgaag  | cgtgagtaag  | ggcaaagggt  | tctctgacca  | tgactttgag | aaattgggat |
| 7201 | ttgaagtcca  | tgctcgtcaca | ggctccctgt  | tcccagagtt  | ggaagtctac | cggtttcttg |
| 7261 | taggcggggt  | tgggcaaagc  | gaaagtaaca  | tcattgaaga  | gaatcttacc | ggctctgggc |
| 7321 | ataaaattgc  | gagtgatgcg  | gaaaggctgt  | ggtacttccg  | ctcgattgtt | gatcacctgg |
| 7381 | gcagctagga  | cgatttctgc  | gaaaccgttg  | atgttgtgtc  | ctacgatgta | taattctatg |

FIG. 11A-2

|       |             |             |            |             |             |             |
|-------|-------------|-------------|------------|-------------|-------------|-------------|
| 7441  | aaacgcggcg  | tgcctctgac  | gtgaggtagc | ttactgagct  | catcaaaggt  | taggtctgtg  |
| 7501  | gggtcagata  | aggcgtagtg  | ttcgagagcc | cattcgtgca  | ggtgaggatt  | tgcattgtagg |
| 7561  | aatgatgacc  | aaagatctac  | cgccagtgct | gtttgttaact | ggtcccgata  | ctgacgaaaa  |
| 7621  | tgccggccaa  | ttgccatttt  | ttctggagtg | acacagtaga  | aggttctggg  | gtcttgttgc  |
| 7681  | catcgatccc  | acttgagttt  | aatggctaga | tcgtgggcca  | tgttgacgag  | acgctcttct  |
| 7741  | cctgagagtt  | tcatgaccag  | catgaaagga | actagttgtt  | tgccaaagga  | tcccatccag  |
| 7801  | gtgtaagttt  | ccacatcgta  | ggtcaggaag | agtctttctg  | tgcgaggatg  | agagccgatc  |
| 7861  | gggaagaact  | ggatttcctg  | ccaccagttg | gaggattggc  | tgttgatgtg  | atggaagtag  |
| 7921  | aagttttctg  | ggcgcgccga  | gcattcgtgt | ttgtgcttgt  | acagacggcc  | gcagtagtcg  |
| 7981  | cagcgttgca  | cgggttgat   | ctcgtgaatg | agctgtacct  | ggcttccctt  | gacgagaaat  |
| 8041  | ttcagtggga  | agccgaggcc  | tggcgattgt | atctcgtgct  | cttctatatt  | cgctgtatcg  |
| 8101  | gcctgttcat  | cttctgtttc  | gatggtggtc | atgctgacga  | gccccgcgg   | gaggcaagtc  |
| 8161  | cagacctcgg  | cgcgggagg   | gcggagctga | aggacgagag  | cgcgcaggct  | gagctgttcc  |
| 8221  | agagtcctga  | gacgctgcgg  | actcaggtta | gtaggtagg   | acagaagatt  | aacttgcattg |
| 8281  | atctttttcca | gggcgtgcgg  | gaggttcaga | tggtagttga  | tttccacagg  | ttcgtttgtta |
| 8341  | gagacgtcaa  | tggcttgacg  | ggttccgtgt | cctttgggcg  | ccactaccgt  | acctttgttt  |
| 8401  | tttcttttga  | tcggtgggtg  | ctctcttgc  | tcttgcatgc  | tcagaagcgg  | tgacggggac  |
| 8461  | gcgcgcggg   | cggcagcgg   | tgttccggac | ccgggggcat  | ggctggtagt  | ggcacgtcgg  |
| 8521  | cgccgcgcac  | gggcagggtc  | tggtagttgc | ctctgagaag  | acttgctg    | gccaccacgc  |
| 8581  | gtcgattgac  | gtcttgtatc  | tgacgtctct | gggtgaaagc  | taccggcccc  | gtgagcttga  |
| 8641  | acctgaaaga  | gagttcaaca  | gaatcaattt | cggtatcgtt  | aacggcagct  | tgtctcagta  |
| 8701  | tttcttgtac  | gtcaccagag  | ttgtccctgg | aggcgatctc  | cgccatgaac  | tgctcgattt  |
| 8761  | cttctctctg  | aagatctccg  | cgaccgcctc | tttcgacgg   | ggccgcgagg  | tcattggaga  |
| 8821  | tacggcccat  | gagttgggag  | aatgcattca | tgcccgcctc  | gttccagacg  | cggctgtaaa  |
| 8881  | ccacggcccc  | ctcggagtct  | cttgccgcga | tcaccacctg  | agcgaggtta  | agctccacgt  |
| 8941  | gtctgggtgaa | gaccgcatag  | ttgcataggc | gctgaaaaag  | gtagttgagt  | gtgggtggcaa |
| 9001  | tgtgttcggc  | gacgaagaaa  | tacatgatcc | atcgtctcag  | cggcatttctg | ctaaccatgc  |
| 9061  | ccagagcttc  | caagcgctcc  | atggcctcgt | agaagtccac  | ggcaaaatta  | aaaaactggg  |
| 9121  | agtttcgcgc  | ggacacggtc  | aattcctcct | cgagaagacg  | gatgagttcg  | gctatgggtg  |
| 9181  | cccgacttct  | gcgttcgaag  | gtctccggga | tctcttcttc  | ctcttctatc  | cttcttcca   |
| 9241  | ctaaccatctc | ttcttctgtct | tcaggcgggg | gcggaggggg  | cacgcgcgca  | cgtcgacggc  |
| 9301  | gcacgggcaa  | acggtcgtatg | aatcgttcaa | tgacctctcc  | gcggcgccgg  | cgcattggtt  |
| 9361  | cagtgcgggc  | gcggccgttc  | tcgcgcggtc | gcagagtaaa  | aacaccgcgc  | cgcattctct  |
| 9421  | taaagtgggtg | actgggagg   | tctccgtttg | ggaggagag   | ggcgctgatt  | atacatttta  |
| 9481  | taaattggcc  | cgtagggact  | gcgcgcagag | atctgatcgt  | gtcaagatcc  | acgggatctg  |
| 9541  | aaacaccttct | gacgaagcgc  | tctaaccagt | tcacagtcaca | aggtaggctg  | agtagcgctt  |
| 9601  | cttgtggggc  | ggggtggtta  | tgtgttcgg  | ctgggtcttc  | tgtttcttct  | tcattctcgg  |
| 9661  | aaggtgagac  | gatgctgctg  | gtgatgaaat | taaagtaggc  | agttctaaga  | cggcggtatg  |
| 9721  | tggcgaggag  | caccaggtct  | ttgggtccgg | cttgctggat  | acgcaggcga  | ttggccattc  |
| 9781  | cccaagcatt  | atcctgacat  | ctagcaagat | ctttgtagta  | gtcttgcatg  | agccgttcta  |
| 9841  | cgggcacttc  | ttcctcaccc  | gttctgcat  | gcatacgtgt  | gagtcctaat  | ccgcgcattg  |
| 9901  | ctgttaccag  | tgccaaagtca | gtctacgact | tttcggcgag  | gatggcttgc  | gtacttggg   |
| 9961  | taagggtggc  | ttgaaagtca  | tcaaaatcca | caaagcgggtg | gtaagccctt  | gtattaatgg  |
| 10021 | tgtaaagcaca | gttggccatg  | actgaccagt | taactgtctg  | gtgaccagg   | cgcacgagct  |
| 10081 | cggtgtattt  | aaggcgcgaa  | taggcgcggg | tgtcaaagat  | gtaatcgttg  | caggtgcgca  |
| 10141 | ccagatactg  | gtaccctata  | agaaaatgcg | gcggtgggtg  | gcggtagaga  | ggccatcggt  |
| 10201 | ctgtagctgg  | agcgccagg   | gcgaggtctt | ccaacataag  | gcggtgatag  | ccgtagatgt  |
| 10261 | acctggacat  | ccagggtgatt | cctgcggcgg | tagtagaagc  | ccgaggaagc  | tcgcgtacgc  |
| 10321 | ggttccaaat  | gttgcgtagc  | ggcatgaagt | agttcattgt  | aggcacgggt  | tgaccagtga  |
| 10381 | ggcgcgcgca  | gtcattgatg  | ctctatagac | acggagaaaa  | tgaaagcgtt  | cagcgactcg  |
| 10441 | actccgtagc  | ctggagggaac | gtgaacgggt | tgggtcgcgg  | tgtaccccg   | ttcgagactt  |
| 10501 | gtactcgagc  | cggccggagc  | cgcggtcaac | gtgggtattg  | cactcccgtc  | tcgaccagc   |
| 10561 | ctacaaaaat  | ccaggatacg  | gaatcgagtc | gttttgcctg  | tttccgaatg  | gcagggaagt  |
| 10621 | gagtcctatt  | tttttttttt  | ttttgcgcgt | cagatgcac   | ccgtgctcgc  | acagatgcgc  |
| 10681 | ccccaaacaac | agccccctc   | gcagcagcag | cagcagcagc  | aaccacaaaa  | ggctgtccct  |
| 10741 | gcaactactg  | caactgccgc  | cgtgagcgg  | gcgggacagc  | ccgcctatga  | tctggacttg  |
| 10801 | gaagagggcg  | aaggactggc  | acgtctaggt | gcgccttcgc  | ccgagcggca  | tccgcgagtt  |
| 10861 | caactgaaaa  | aagattctcg  | cgaggcgtat | gtgccccaac  | agaacctatt  | tagagacaga  |
| 10921 | agcgcgagg   | agccggagga  | gatgcgagct | tcccgttcta  | acgcgggtcg  | tgagctgcgt  |
| 10981 | cacgggttgg  | accgaagacg  | agtgtttcga | gcagaggatt  | tcgaagttag  | tgaagtgcaca |
| 11041 | gggatcagtc  | ctgccagggc  | acacgtggct | gcagccaacc  | ttgtatcggc  | ttacgagcag  |
| 11101 | acagtaaagg  | aagagcgtaa  | cttccaaaag | tcttttaata  | atcatgtgcg  | aacctgatt   |

FIG. 11A-3

|       |             |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| 11161 | gccccggaag  | aagttaccct  | tggtttgatg  | catttggtggg | atttgatgga  | agctatcatt  |
| 11221 | cagaacccta  | ctagcaaacc  | tctgaccgcc  | cagctgtttc  | tggtggtgca  | acacagcaga  |
| 11281 | gacaatgagg  | ctttcagaga  | ggcgctgctg  | aacatcaccg  | aacccgaggg  | gagatggttg  |
| 11341 | tatgatctta  | tcaacattct  | acagagtatc  | atagtgcagg  | agcggagcct  | gggcctggcc  |
| 11401 | gagaaggtag  | ctgccatcaa  | ttactcgggt  | ttgagcttgg  | gaaaatatta  | cgctcgcaaa  |
| 11461 | atctacaaga  | ctccatacgt  | tcccatagac  | aaggaggtga  | agatagatgg  | gttctacatg  |
| 11521 | cgcacgacgc  | tcaaggtctt  | gaccctgagc  | gatgatcttg  | gggtgtatcg  | caatgacaga  |
| 11581 | atgcatcgcg  | cggttagcgc  | cagcaggagg  | cgcgagttaa  | gcgacagggg  | actgatgcac  |
| 11641 | agtttgcaaa  | gagctctgac  | tggagctgga  | accgaggggtg | agaattactt  | cgacatggga  |
| 11701 | gctgacttgc  | agtggcagcc  | tagtcgcagg  | gctctgagcg  | ccgcgacggc  | aggatgtgag  |
| 11761 | cttccttaca  | tagaagaggc  | ggatgaaggc  | gaggaggaag  | agggcgagta  | cttggaagac  |
| 11821 | tgatggcaca  | acccgtgttt  | tttgctagat  | ggaacagcaa  | gcaccggatc  | ccgcaatgcg  |
| 11881 | ggcggcgctg  | cagagccagc  | cgctcggcat  | taactcctcg  | gacgattgga  | cccaggccat  |
| 11941 | gcaacgtatc  | atggcggtta  | cgactcgcaa  | ccccgaagcc  | tttagacagc  | aaccccgagg  |
| 12001 | caaccgtcta  | tcggccatca  | tggaaagctgt | agtgccttcc  | cgatctaata  | ccactcatga  |
| 12061 | gaaggtcctg  | gccatcgtga  | acgcgttggg  | ggagaacaaa  | gctattcgtc  | cagatgaggc  |
| 12121 | cggtactggt  | tacaacgctc  | tcttagaacg  | cgtggctcgc  | tacaacagta  | gcaatgtgca  |
| 12181 | aaccaatttg  | gaccgtatga  | taacagatgt  | acgcgaagcc  | gtgtctcagc  | gcgaaagggt  |
| 12241 | ccagcgtgat  | gccaacctgg  | gttcgctggg  | ggcggttaaat | gctttcttga  | gtactcagcc  |
| 12301 | tgctaattgtg | ccgcgtgggtc | aacaggatta  | tactaacttt  | ttaagtgtct  | tgagactgat  |
| 12361 | ggtatcagaa  | gtacctcaga  | gcgaagtgtg  | tcagtccggg  | cctgattact  | tctttcagac  |
| 12421 | tagcagacag  | ggcttgacga  | cggtaaatct  | gagccaagct  | tttaaaaacc  | ttaaagggtt  |
| 12481 | gtggggagtg  | catgccccgg  | taggagaaaag | agcaaccgtg  | tctagcttgt  | taactccgaa  |
| 12541 | ctcccgctg   | ttattactgt  | tggtagctcc  | tttcaccgac  | agcggtagca  | tcgaccgtaa  |
| 12601 | ttcctatttg  | ggttacctac  | taaacctgta  | tcgcgaagcc  | atagggcaaa  | atcagggtga  |
| 12661 | cgagcagacc  | tatcaagaaa  | ttacccaagt  | cagtcgcgct  | ttgggacagg  | aagacactgg  |
| 12721 | cagtttgga   | gccactctga  | acttcttgct  | taccaatcgg  | tctcaaaaaga | tccctcctca  |
| 12781 | atatgctctt  | actgcgagg   | aggagaggat  | ccttagatat  | gtgcagcaga  | gcgtgggatt  |
| 12841 | gtttctgatg  | caagaggggg  | caactccgac  | tgcagcactg  | gacatgacag  | cgcgaaatat  |
| 12901 | ggagcccagc  | atgtatgcca  | gtaaccgacc  | tttcattaac  | aaactgctgg  | actacttgca  |
| 12961 | cagagctggc  | gctatgaact  | ctgattattt  | acccaatgcc  | atcttaaac   | cgactggct   |
| 13021 | gccccacct   | ggtttctaca  | cgggcgaaata | tgacatgcc   | gaccctaata  | acggatttct  |
| 13081 | gtgggacgac  | gtggacagcg  | atgttttttc  | acctctttct  | gatcatcgca  | cgtggaaaaa  |
| 13141 | ggaaggcggt  | gatagaatgc  | attcttctgc  | atcgctgtcc  | ggggtcatgg  | gtgctaccgc  |
| 13201 | ggctgagccc  | gagtctgcaa  | gtccttttcc  | tagtctaccc  | ttttctctac  | acagtgtacg  |
| 13261 | tagcagcgaa  | gtgggtagaa  | taagtgcgcc  | gagtttaaat  | ggcgaagagg  | agtacctaaa  |
| 13321 | cgattccttg  | ctcagaccgg  | caagagaaaa  | aaatttccca  | aacaatggaa  | tagaaagttt  |
| 13381 | ggtggataaa  | atgagtagat  | ggaagactta  | tgctcaggat  | cacagagacg  | agcctgggat  |
| 13441 | catggggact  | acaagtagag  | cgagccgtag  | acgccagcgc  | catgacagac  | agaggggtct  |
| 13501 | tgtgtgggac  | gatgaggatt  | cggccgatga  | tagcagcgtg  | ttggacttgg  | gtgggagagg  |
| 13561 | aaggggcaac  | ccgtttgtct  | atttgcgccc  | tcgcttgggt  | ggtatgttgt  | gaaaaaaaaa  |
| 13621 | aaaaaagaaa  | aactcaccaa  | ggccattggc  | acgagcgtac  | gttcgtttct  | ctttattatc  |
| 13681 | tgtgtctagt  | ataatgaggc  | gagtcgtgct  | aggcgagcgc  | gtgggtgtatc | cggagggtcc  |
| 13741 | tctccttctg  | tacgagagcg  | tgatgcagca  | gcagcaggcg  | acggcggtga  | tgcaatcccc  |
| 13801 | actggaggct  | ccctttgtgc  | ctccgcgata  | cctggcacct  | acggagggca  | gaaacagcat  |
| 13861 | tcgttactcg  | gaactggcac  | ctcagtagca  | taccaccagg  | ttgtatctgg  | tggacaacaa  |
| 13921 | gtcggcggac  | attgcttctc  | tgaactatca  | gaatgaccac  | agcaacttct  | tgaccacggt  |
| 13981 | ggtgcagaac  | aatgacttta  | cccctacgga  | agccagcacc  | cagaccatta  | actttgatga  |
| 14041 | acgatcgcg   | tggggcggtc  | agctaaagac  | catcatgcat  | actaacatgc  | caaactgtga  |
| 14101 | cgagtatatg  | tttagtaaca  | agttcaaagc  | gcgtgtgatg  | gtgtccagaa  | aacctcccga  |
| 14161 | cggtgctgca  | gttggggata  | cttatgatca  | caagcaggat  | attttggaat  | atgagtgggt  |
| 14221 | cgagtttact  | ttgccagaag  | gcaacttttc  | agttactatg  | actattgatt  | tgatgaacaa  |
| 14281 | tgccatcata  | gataattact  | tgaagtggg   | tagacagaat  | ggagtgtctt  | aaagtgcacat |
| 14341 | tgggtgtaag  | ttcgacacca  | ggaacttcaa  | gctgggatgg  | gatcccgaag  | caaagttgat  |
| 14401 | catgcctgga  | gtgtatacgt  | atgaagcctt  | ccatcctgac  | attgtcttac  | tgccgtggctg |
| 14461 | cggagtggat  | tttaccgaga  | gtcgtttgag  | caaccttctt  | ggtatcagaa  | aaaaacagcc  |
| 14521 | atttcaagag  | ggttttaaga  | ttttgtatga  | agatttagaa  | ggtggtaata  | ttccggccct  |
| 14581 | cttggtatga  | gatgcctatg  | agaacagtaa  | gaaagaacaa  | aaagccaaaa  | tagaagctgc  |
| 14641 | tacagctgct  | gcagaagcta  | aggcaaacat  | agttgccagc  | gactctacaa  | gggttgctaa  |
| 14701 | cgtgaggag   | gtcagaggag  | acaattttgc  | gccaacacct  | gttccgactg  | cagaatcatt  |
| 14761 | attggccgat  | gtgtctgatg  | gaacggacgt  | gaaactcact  | attcaacctg  | tagaaaaaga  |
| 14821 | tagtaagaat  | agaagctata  | atgtgttgga  | agacaaaatc  | aacacagcct  | atcgcagttg  |

FIG. 11A-4

|       |             |            |             |             |             |             |
|-------|-------------|------------|-------------|-------------|-------------|-------------|
| 14881 | gtatcttttcg | tacaattatg | gcgatccccg  | aaaaggagtg  | cgttcctgga  | cattgctcac  |
| 14941 | cacctcagat  | gtcacctgcy | gagcagagca  | ggtttactgg  | tcgcttccag  | acatgatgaa  |
| 15001 | ggatcctgtc  | actttccgct | ccactagaca  | agtcagtaac  | taccctgtgg  | tgggtgcaga  |
| 15061 | gcttatgccc  | gtcttctcaa | agagcttcta  | caacgaacaa  | gctgtgtact  | cccagcagct  |
| 15121 | ccgccagtcc  | acctcgctta | cgcacgtctt  | caaccgcttt  | cctgagaacc  | agattttaat  |
| 15181 | ccgtccgccc  | gcgcccacca | ttaccaccgt  | cagtgaaaac  | gttcctgctc  | tcacagatca  |
| 15241 | cgggaccctg  | ccgttgcgca | gcagtatccg  | gggagtccaa  | cgtgtgaccg  | ttactgacgc  |
| 15301 | cagacgccgc  | acctgtccct | acgtgtacaa  | ggcactgggc  | atagtcgcac  | cgcgcgctcc  |
| 15361 | ttcaagccgc  | actttctaaa | aaaaaaatgt  | ccattcttat  | ctcgcccagt  | aataacaccg  |
| 15421 | gttggggctc  | gcgcgctcca | agcaagatgt  | acggaggcgc  | acgcaaactg  | tctaccaaac  |
| 15481 | atcccgtgcy  | tgttcgcgga | catttttcgcy | ctccatgggg  | tgccctcaag  | ggccgcactc  |
| 15541 | gcgttcgaac  | caccgtcgat | gatgtaatcg  | atcagggtgg  | tgccgacgcc  | cgtaattata  |
| 15601 | ctctactgcy  | gcctacatct | actgtggatg  | cagttattga  | cagtgtagtgc | gctgacgctc  |
| 15661 | gcaactatgc  | tcgacgtaag | agccggcgaa  | ggcgcatatg  | cagacgccac  | cgagctacca  |
| 15721 | ctgccatgcy  | agccgcaaga | gctctgctac  | gaagagctag  | acgcgtgggg  | cgaagagcca  |
| 15781 | tgcttagggc  | ggccagacgt | gcagcttcgcy | gcgccagcgc  | cggcaggtcc  | cgcaggcaag  |
| 15841 | cagccgctgt  | cgcagcggcg | actattgccc  | acatggccca  | atcgcgaaag  | ggcaatgtat  |
| 15901 | actgggtgcy  | tgacgctgcc | accgggtcaac | gtgtaccctg  | gcgcacccct  | ccccctcgca  |
| 15961 | cttagaagat  | actgagcagt | ctccgatggt  | gtgtcccagc  | ggcgaggatg  | tccaagcgca  |
| 16021 | aatacaagga  | agaaatgctg | caggttatcg  | ccactgaagt  | ctacggccaa  | ccgttgaagg  |
| 16081 | atgaaaaaaa  | accccgcmaa | atcaagcggg  | ttaaaaagga  | caaaaaagaa  | gaggaagatg  |
| 16141 | gcgatgatgg  | gctggcgagg | tttgtgcgcy  | agtttgcccc  | acggcgacgc  | gtgcaatggc  |
| 16201 | gtgggcygcaa | agttcgacat | gtgttgagac  | ctggaacttc  | gggtggtctt  | acaccggcg   |
| 16261 | agcgttcaag  | cgctactttt | aagcgttcc   | atgatgaggt  | gtacggggat  | gatgatattc  |
| 16321 | ttgagcaggc  | ggctgaccga | ttaggcgagt  | ttgcttatgg  | caagcgtagt  | agaataactt  |
| 16381 | ccaaggatga  | gacagtgtca | atacccttgg  | atcatggaaa  | tcccacccct  | agtcttaaac  |
| 16441 | cggtcacttt  | gcagcaagtg | ttacccgtaa  | ctccgcgaac  | aggtgttaaa  | cgcgagggtg  |
| 16501 | aagatttgta  | tcccactatg | caactgatgg  | tacccaaacg  | ccagaagtgg  | gaggacgttt  |
| 16561 | tggagaaaag  | aaaagtggat | ccagatattc  | aacctgagggt | taaagtgaga  | cccattaagc  |
| 16621 | aggtgacgcc  | tggtctgggg | gtacaaactg  | tagacattaa  | gattcccact  | gaaagtatgg  |
| 16681 | aagtgcacaa  | tgaacccgca | aagcctactg  | ccacctccac  | tgaagtgcac  | acggatccat  |
| 16741 | ggatgcccac  | gcctattaca | actgacgcgc  | ccgggtccac  | tcgaagatcc  | cgacgaaagt  |
| 16801 | acgggtccagc | aagtctgttg | atgcccaatt  | atgttggtaca | cccatctatt  | attcctactc  |
| 16861 | ctgggttaccg | aggcactcgc | tactatcgca  | gccgaaacag  | tacctcccgc  | cgtcgccgca  |
| 16921 | agacacctgc  | aaatcgcagt | cgtcgccgta  | gacgcacaag  | caaaccgact  | cccggcgccc  |
| 16981 | tggtgcggca  | agtgtaccgc | aatggtagtg  | cggaaccttt  | gacactgccc  | cgtgcgcgtt  |
| 17041 | accatccgag  | tatcatcact | taatcaatgt  | tcgcgctgcc  | tccttgccaga | tatgtgccctc |
| 17101 | acttgctcgcc | ttcgcgttcc | catcactggg  | taccgaggaa  | gaaactcgcy  | ccgtagaaga  |
| 17161 | gggatgttgg  | gacgcggaat | gcgacgctac  | aggcgacggc  | gtgctatccg  | caagcaattg  |
| 17221 | cgggggtgggt | ttttaccagc | cttaattcca  | attatcgctg  | ctgcaattgg  | cgcgatacca  |
| 17281 | ggcatagctt  | ccgtggcggt | tcaggcctcg  | caacgacatt  | gacattggaa  | aaaaaacgta  |
| 17341 | taataaaaaa  | aaaatacaat | ggactctgac  | actcctgggc  | ctgtgactat  | gttttcttag  |
| 17401 | agatggaaga  | catcaatttt | tcactccttg  | ctccgcgaca  | cggcacggaag | cggtacatgg  |
| 17461 | gcacctggag  | cgacatcggc | acgagccaac  | tgaacggggg  | cgccttcaat  | tggagcagta  |
| 17521 | tctggagcgg  | gcttaaaaaa | tttgggtcaa  | ccataaaaaa  | atacgggaac  | aaagcttggg  |
| 17581 | acagcagtac  | aggacaggcg | cttagaaata  | aacttaaaga  | ccagaacttc  | caacaaaaag  |
| 17641 | tagtcgatgg  | gatagcttcc | ggcatcaatg  | gagtggtaga  | tttgggtaac  | caggctgtgc  |
| 17701 | agaaaaagat  | aaacagtcgt | ttggacctcg  | cgccagcaac  | cccaggtgaa  | atgcaagtgg  |
| 17761 | aggaagaaat  | tcctccgcca | gaaaaacgag  | gcgacaagcg  | tccgcgtccc  | gatttggaag  |
| 17821 | agacgctggg  | gacgcgcgta | gatgaaccgc  | cttcttatga  | ggaagcaacg  | aagcttggaa  |
| 17881 | tgcccaccac  | tagaccgata | gccccaatgg  | ccaccggggg  | gatgaaacct  | tctcagttgc  |
| 17941 | atcgaccctg  | caccttggtg | ttgccccctc  | cccctgctgc  | tactgctgta  | cccgttctta  |
| 18001 | agcctgtcgc  | tgccccgaaa | ccagtcgcgc  | tagccagggtc | acgtccccgg  | ggcgctcctc  |
| 18061 | gtccaaatgc  | gcactggcaa | aatactctga  | acagcatcgt  | gggtctaggc  | gtgcaaatgt  |
| 18121 | taaaacgcgc  | tcgctgcttt | taattaaata  | tggagtagcg  | cttaacttgc  | ctatctgtgt  |
| 18181 | atatgtgtca  | ttacacgcgc | tcacagcagc  | agaggaaaaa  | aggaagaggt  | cgtgcgtcga  |
| 18241 | cgctgagtta  | ctttcaagat | ggccacccca  | tcgatgctgc  | cccaatgggc  | atacatgcac  |
| 18301 | atcgccggac  | aggatgcttc | ggagtacctg  | agtccgggtc  | tggtgcagtt  | cgcgcgcgcc  |
| 18361 | acagacacct  | acttcaactc | gggaaataag  | tttagaaatc  | ccaccgtagc  | ggcgacccac  |
| 18421 | gatgtgacca  | ccgaccgtag | ccagcgggtc  | atgttgcgct  | tcgtgcccgt  | tgcaggggag  |
| 18481 | gacaatacat  | actcttacia | agtgcgggtac | accctggccg  | tgggcgacaa  | cagagtgcgt  |
| 18541 | gatatggcca  | gcacgttctt | tgacattagg  | ggcgtgttgg  | acagaggtcc  | cagtttcaaa  |

FIG. 11A-5

|       |             |             |            |             |             |             |
|-------|-------------|-------------|------------|-------------|-------------|-------------|
| 18601 | ccctattctg  | gtacggctta  | caactctctg | gctcctaag   | gcgctccaa   | tgcattctca  |
| 18661 | tggattgcaa  | aaggcgtacc  | aactgcagca | gccgcaggca  | atgggtgaaga | agaacatgaa  |
| 18721 | acagaggaga  | aaactgctac  | ttacactttt | gccaatgctc  | ctgtaaaagc  | cgaggctcaa  |
| 18781 | attacaaaag  | agggcttacc  | aataggtttg | gagatttcag  | ctgaaaacga  | atctaaaccc  |
| 18841 | atctatgcag  | ataaacttta  | tcagccagaa | cctcaagtgg  | gagatgaaac  | ttggactgac  |
| 18901 | ctagacggaa  | aaaccgaaga  | gtatggaggc | agggctctaa  | agcctactac  | taacatgaaa  |
| 18961 | ccctgttacg  | ggctctatgc  | gaagcctact | aatttaaaag  | gtggtcaggc  | aaaaccgaaa  |
| 19021 | aactcggaac  | cgtcgagtga  | aaaaattgaa | tatgatattg  | acatggaatt  | ttttgataac  |
| 19081 | tcatcgcaaa  | gaacaaactt  | cagtctctaa | attgtcatgt  | atgcagaaaa  | tgtagggtttg |
| 19141 | gaaacgccag  | acactcatgt  | agtgtacaaa | cctggaacag  | aagacacaag  | ttccgaagct  |
| 19201 | aatttgggac  | aacagtctat  | gcccacagaa | cccaactaca  | ttggcttcag  | agataacttt  |
| 19261 | attggactca  | tgtactataa  | cagtactggg | aacatggggg  | tgctggctgg  | tcaagcgtct  |
| 19321 | cagttaaatg  | cagtgggtga  | cttgcaggac | tgaaacacag  | aactttctta  | tgtcactctt  |
| 19381 | cttgactctc  | tgggcgacag  | aaccagatgc | tttagcatgt  | ggaatcaggc  | tgtggacagt  |
| 19441 | tatgatcctg  | atgtacgtgt  | tattgaaaat | catgggtgtg  | aagatgaact  | tcccaactat  |
| 19501 | tgttttccac  | tggacggcat  | aggtgttcca | acaaccagtt  | acaaatcaat  | agttccaaat  |
| 19561 | ggagaagata  | ataataattg  | gaaagaacct | gaagtaaagt  | gaacaagtga  | gatcggacag  |
| 19621 | ggtaatttgt  | ttgccatgga  | aattaacctt | caagccaatc  | tatggcggaag | tttcttttat  |
| 19681 | tccaatgtgg  | ctctgtatct  | cccagactcg | tacaaataca  | ccccgtccaa  | ctgtcactctt |
| 19741 | ccagaaaaca  | aaaacaccta  | cgactacatg | aacggggcggg | tgggtgccgcc | atctctagta  |
| 19801 | gacacctatg  | tgaacattgg  | tgccagggtg | tctctggatg  | ccatggacaa  | tgtcaaccca  |
| 19861 | ttcaaccacc  | accgtaacgc  | tggcttgctg | taccgatcta  | tgcttctggg  | taacggacgt  |
| 19921 | tatgtgcctt  | tccacatata  | agtgcctcaa | aaattcttcg  | ctgttaaaaa  | cctgctgctt  |
| 19981 | ctcccaggct  | cctacactta  | tgagtggaa  | tttaggaagg  | atgtgaacat  | ggttctacag  |
| 20041 | agttccctcg  | gtaacgacct  | cggggtagat | ggcgccagca  | tcagtttcac  | gagcatcaac  |
| 20101 | ctctatgcta  | cttttttccc  | catgggtcac | aacaccgctt  | ccacccttga  | agccatgctg  |
| 20161 | cggaatgaca  | ccaatgatca  | gtcattcaac | gactacctat  | ctgcagctaa  | catgctctac  |
| 20221 | cccattcctg  | ccaatgcaac  | caatattccc | atttccattc  | cttctcgcaa  | ctgggaggct  |
| 20281 | ttcagaggct  | ggtcattttac | cagactgaaa | accaaagaaa  | ctccctcttt  | ggggctctgga |
| 20341 | tttgaccctt  | actttgtcta  | ttctggttct | attccctacc  | tggatgggtc  | cttctacctg  |
| 20401 | aaccacactt  | ttaagaagg   | ttccatcatg | tttgactctt  | cagtggagctg | gcctggaaat  |
| 20461 | gacagggttac | tatctcctaa  | cgaatttgaa | ataaagcgca  | ctgtggatgg  | cgaaggctac  |
| 20521 | aacgtagccc  | aatgcaacat  | gaccaaaagc | tgggtcttgg  | tacagatgct  | cgccaactac  |
| 20581 | aacatcggtt  | atcagggtct  | ctacattcca | gaaggatata  | aagatcgcat  | gtattcattt  |
| 20641 | ttcagaaact  | tccagcccat  | gagcaggcag | gtgggtgatg  | aggtcaatta  | caaagacttc  |
| 20701 | aaggccgtcg  | ccatacccta  | ccaacacac  | aactctggct  | ttgtgggtta  | ctgggtccg   |
| 20761 | accatgcgcc  | aagggtcaacc | ctatcccgtt | aactatccct  | atccactcat  | tggaaacact  |
| 20821 | gccgtaaata  | gtgttacgca  | gaaaaagttc | ttgtgtgaca  | gaacctatgt  | gcgcataccg  |
| 20881 | ttctcgagca  | acttcatgtc  | tatggggggc | cttacagact  | tgggacagaa  | tatgctctat  |
| 20941 | gccaaactcag | ctcatgctct  | ggacatgacc | tttgagggtg  | atcccatgga  | tgagccacc   |
| 21001 | ctgctttatc  | ttctcttcga  | agtttttcag | gtgggtcagag | tgcactcagc  | acaccggggc  |
| 21061 | atcatcgagg  | cagttctacct | gcgtacaccg | ttctcgcccg  | gtaacgctac  | cacgtgaaga  |
| 21121 | gcttcttgct  | tcttgcaaat  | agcagctgca | accatggcct  | gcggatccca  | aaacggctcc  |
| 21181 | agcgagcaag  | agctcagagc  | cattgtccaa | gacctgggtt  | gcggacccta  | ttttttggga  |
| 21241 | acctacgata  | agcgcttccc  | gggggttcag | gcccccgata  | agctcgcttg  | tgccattgta  |
| 21301 | aatacggccg  | gacgtgagac  | ggggggagag | cactgggttg  | ctttcggttg  | gaaccacagt  |
| 21361 | tctaacacct  | gctacctttt  | tgatctcttt | ggattctcgg  | atgatcgtct  | caaacagatt  |
| 21421 | taccagtttg  | aatatgaggg  | tctcctgcgc | cgcagcgctc  | ttgctaccaa  | ggaccgctgt  |
| 21481 | attacgctgg  | aaaaatctac  | ccagaccgtg | caggggcccc  | gttctgcgcg  | ctgcggactt  |
| 21541 | ttctgctgca  | tgttccttca  | cgcctttgtg | cactggcctg  | accgtcccat  | ggacggaaac  |
| 21601 | cccaccatga  | aattgctaac  | tggagtgcc  | aacaacatgc  | ttcattctcc  | taaagtccag  |
| 21661 | cccaccctgt  | gtgacaatca  | aaaagcactc | taccattttc  | ttataacca   | ttcgcttat   |
| 21721 | tttcgctctc  | atcgtaacaa  | catcgaaagg | gccactgcgt  | tcgaccgtat  | ggatgttcaa  |
| 21781 | taatgactca  | tgtaaacac   | gtgttcaata | aacatcactt  | tattttttta  | catgtatcaa  |
| 21841 | ggctctggat  | tacttattta  | tttacaagtc | gaatgggttc  | tgacgagaat  | cagaatgacc  |
| 21901 | cgcaggcagt  | gatacgttgc  | ggaactgata | cttgggttgc  | cacttgaatt  | cggaatcac   |
| 21961 | caacttggga  | accggtatat  | cgggcaggat | gtcactccac  | agctttctgg  | tcagctgcaa  |
| 22021 | agctccaagc  | aggtcaggag  | ccgaaatctt | gaaatcacaa  | ttaggaccag  | tgctctgagc  |
| 22081 | cgcagagttg  | cgttacaccg  | gattgcagca | ctgaaacacc  | atcagcgagc  | gatgtctcac  |
| 22141 | gcttgccagc  | acgggtggat  | ctgcaatcat | gcccacatcc  | agatcttcag  | cattggcaat  |
| 22201 | gctgaacggg  | gtcatcttgc  | aggtctgcct | acccatggcg  | ggcaccctaa  | taggcttggt  |
| 22261 | gttgcaatcg  | cagtgcaggg  | ggatcagtat | catcttggcc  | tgatctgtct  | tgattcctgg  |

FIG. 11A-6



|       |             |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| 22321 | atacacgggt  | ctcatgaaag  | catcatattg  | cttgaaagcc  | tgctgggctt  | tactaccctc  |
| 22381 | ggtataaaac  | atcccgcagg  | acctgctcga  | aaactgggta  | gctgcacagc  | cggcatcatt  |
| 22441 | cacacagcag  | cgggcgtcat  | tgttggctat  | ttgcaccaca  | cttctgcccc  | agcggttttg  |
| 22501 | ggtgattttg  | gttcgctcgg  | gattctcctt  | taaggctcgt  | tgtccgttct  | cgctggccac  |
| 22561 | atccatctcg  | ataatctgct  | ccttctgaat  | cataatattg  | ccatgcaggc  | acttcagctt  |
| 22621 | gccctcataa  | tcattgcagc  | catgaggcca  | caacgcacag  | cctgtacatt  | cccaattatg  |
| 22681 | gtggggcgatc | tgagaaaaag  | aatgtatcat  | tccctgcaga  | aatcttccca  | tcacgtgct   |
| 22741 | cagtgtcttg  | tgactagtga  | aagttaactg  | gatgcctcgg  | tgctcttcgt  | ttacgtactg  |
| 22801 | gtgacagatg  | cgcttgattt  | gttcgtgttg  | ctcaggcatt  | agtttaaaac  | aggttctaag  |
| 22861 | ttcgttatcc  | agcctgtact  | tctccatcag  | cagacacatc  | acttccatgc  | ctttctccca  |
| 22921 | agcagacacc  | aggggcaagc  | taatcggaat  | cttaacagtg  | caggcagcag  | ctccttttagc |
| 22981 | cagagggtca  | tcttttagcga | tcttctcaat  | gcttcttttg  | ccatccttct  | caacgatgcg  |
| 23041 | cacgggcggg  | tagctgaaac  | ccactctcac  | aagttgcgcc  | tcttctcttt  | cttcttcgct  |
| 23101 | gtcttgactg  | atgtcttgca  | tggggatatg  | tttggctctt  | cttggcttct  | ttttgggggg  |
| 23161 | tatcggagga  | ggaggactgt  | cgctccgttc  | cggagacagg  | gaggattgtg  | acgtttcgct  |
| 23221 | caccattacc  | aactgactgt  | cggtagaaga  | acctgacccc  | acacggcgac  | aggtgttttt  |
| 23281 | cttcgggggg  | agaggtggag  | gcgattgcga  | agggctgcgg  | tccgacctgg  | aaggcggatg  |
| 23341 | actggcagaa  | ccccttccgc  | gttcgggggt  | gtgctccctg  | tggcggtcgc  | ttaactgatt  |
| 23401 | tccttcgcgg  | ctggccattg  | tgttctccta  | ggcagagaaa  | caacagacat  | ggaactcag   |
| 23461 | ccattgctgt  | caacatcgcc  | acgagtgcga  | tcacatctcg  | tcctcagcga  | cgaggaaaag  |
| 23521 | gagcagagct  | taagcattcc  | accgcccagt  | cctgccacca  | cctctaccct  | agaagataag  |
| 23581 | gaggtcgcag  | catctcatga  | catgcagaat  | aaaaaagcga  | aagagtctga  | gacagacatc  |
| 23641 | gagcaagacc  | cgggctatgt  | gacaccgggt  | gaacacgagg  | aagagttaa   | acgctttcta  |
| 23701 | gagagagagg  | atgaaaactg  | cccaaaacag  | cgagcagata  | actatcacca  | agatgctgga  |
| 23761 | aatagggatc  | agaacaccga  | ctacctcata  | gggcttgacg  | gggaagacgc  | gctccttaaa  |
| 23821 | catctagcaa  | gacagtcgct  | catagtcaag  | gatgcattat  | tggacagaac  | tgaagtgcc   |
| 23881 | atcagtgtgg  | aagagctcag  | ctgcgcctac  | gagcttaacc  | ttttttcacc  | tcgtactccc  |
| 23941 | cccaaacgtc  | agccaaacgg  | cacctgcgag  | ccaaatcctc  | gcttaaactt  | ttatccagct  |
| 24001 | tttgctgtgc  | cagaagtact  | ggctacctat  | cacatctttt  | ttaaaaatca  | aaaaattcca  |
| 24061 | gtctctgcgc  | gcgctaactg  | caccgcgcgc  | gatgccttac  | tcaatctggg  | acctggttca  |
| 24121 | cgcttacctg  | atatagcttc  | cttgggaagag | gttccaaaga  | tcttcgaggg  | tctgggcaat  |
| 24181 | aatgagactc  | gggccgcaaa  | tgctctgcaa  | aagggaagaa  | atggcatgga  | tgagcatcac  |
| 24241 | agcgttctgg  | tgggaattgga | aggcgataat  | gccagactcg  | cagtactcaa  | gcgaagcgtc  |
| 24301 | gaggtcacac  | acttcgcata  | tcccgtgtgc  | aacctgcccc  | ctaaagtcac  | gacggcggtc  |
| 24361 | atggaccagt  | tactcattaa  | gcgcgcaagt  | cccccttcag  | aagacatgca  | tgaccagat   |
| 24421 | gcctgtgatg  | agggtaaacc  | agtgttcagt  | tagtagcagc  | taacccgatg  | gagcgggacc  |
| 24481 | gactctcccc  | gggattttgga | agagcgtcgc  | aagcttatga  | tggccgtggg  | gctggttacc  |
| 24541 | gtagaactag  | agtgtctccg  | acgtttcttt  | accgattcag  | aaaccttgcg  | caaactcgaa  |
| 24601 | gagaatctgc  | actacacttt  | tagacacggc  | tttgtgcggc  | aggcatgcaa  | gatatactaac |
| 24661 | gtggaactca  | ccaacctggt  | ttcctacatg  | ggtattctgc  | atgagaatcg  | cctaggacaa  |
| 24721 | agcgtgtgcg  | acagcacctt  | taagggggaa  | gcccgcgctg  | attacatccg  | cgattgtgtc  |
| 24781 | tatctctacc  | tgtgccacac  | tggtgcaaac  | ggcattgggtg | tatggcagga  | atgttttgaa  |
| 24841 | gaacagaact  | tgaaagagct  | tgacaagctc  | ttacagaaat  | ctcttaaggt  | tctgtggaca  |
| 24901 | gggttcgacg  | agcgcaccgt  | cgcttccgac  | ctggcagacc  | tcacttcccc  | agagcgtctc  |
| 24961 | agggttactt  | tgcgaaacgg  | attgcctgac  | tttatgagcc  | agagcatgct  | taacaatttt  |
| 25021 | cgctctttca  | tcctggaacg  | ctccggtatc  | ctgcccgcga  | cctgctgcgc  | actgcctctc  |
| 25081 | gactttgtgc  | ctctcaccta  | ccgcgagtgc  | ccccgcgcgc  | tatggagtca  | ctgctacctg  |
| 25141 | ttccgtctgg  | ccaactatct  | ctcctaccac  | tcggatgtga  | tcgaggatgt  | gagcgggagac |
| 25201 | ggcttgctgg  | agtgccactg  | ccgctgcaat  | ctgtgcacgc  | cccaccgggtc | cctagcttgc  |
| 25261 | aacccccagt  | tgatgagcga  | aacccagata  | ataggcacct  | ttgaattgca  | aggccccagc  |
| 25321 | agccaaggcg  | atgggtcttc  | tcctgggcaa  | agtttaaaac  | tgacccccggg | actgtggacc  |
| 25381 | tcgcctactt  | tgcgcaagtt  | tgctccggaa  | gattaccacc  | cctatgaaat  | caagttctat  |
| 25441 | aggaccat    | cacagcctcc  | aaaggccgaa  | cttccggctt  | gcgtcatcac  | ccaggggggca |
| 25501 | attctggccc  | aattgcaagc  | catccaaaaa  | tcccgcgaag  | aatttctact  | gaaaaagggt  |
| 25561 | aaggggggtct | accttgaccc  | ccagaccggc  | gaggaaactca | acacaagggtt | ccctcaggat  |
| 25621 | gtcccaacga  | cgagaaaaca  | agaagttgaa  | ggtgcagccg  | ccgccccag   | aagatatgga  |
| 25681 | ggaagattgg  | gacagtcagg  | cagaggaggc  | ggaggaggac  | agtctggagg  | acagtctgga  |
| 25741 | ggaagacagt  | ttggaggagg  | aaaacgagga  | ggcagaggag  | gtggaagaag  | taaccgccga  |
| 25801 | caaacgttga  | tcctcggctg  | cggagacaag  | caacagcgct  | accatctccg  | ctccgagctg  |
| 25861 | aggaaccggg  | cggcgctcca  | gcagtagatg  | ggacgagacc  | ggacgcttcc  | cgaacccaac  |
| 25921 | cagcgcttcc  | aagaccggta  | agaaggatcg  | gcagggatac  | aagtcttgcc  | gggggcataa  |
| 25981 | gaatgccatc  | atctcctgct  | tgcatgagtg  | cgggggcaac  | atatacttca  | cgcggcgcta  |

FIG. 11A-7

|       |             |            |             |             |             |             |
|-------|-------------|------------|-------------|-------------|-------------|-------------|
| 26041 | cttgcctat   | caccatggg  | tgaactttc   | gcgcaatgt   | ttgcattact  | accgtcacct  |
| 26101 | ccacagcccc  | tactatagcc | agcaaatccc  | gacagtctcg  | acagataaag  | acagcggcgg  |
| 26161 | cgacctccaa  | cagaaaacca | gcagcggcag  | ttagaaaata  | cacaacaagt  | gcagcaacag  |
| 26221 | gaggattaaa  | gattacagcc | aacgagccag  | cgcaaaccgg  | agagttaaga  | aatcggatct  |
| 26281 | ttccaaccct  | gtatgccatc | ttccagcaga  | gtcgggggtca | agagcaggaa  | ctgaaaataa  |
| 26341 | aaaaccgatc  | tctgcgttcg | ctcaccagaa  | gttggtttgta | tcacaagagc  | gaagatcaac  |
| 26401 | ttcagcgcac  | tctcgaggac | gccgaggctc  | tcttcaacaa  | gtactgcgcg  | ctgactctta  |
| 26461 | aagagtaggc  | agcgaccgcg | cttattcaaa  | aaaggcggga  | attacatcat  | cctcgacatg  |
| 26521 | agtaaagaaa  | ttcccacgcc | ttacatgtgg  | agttatcaac  | cccaaattggg | attggcagca  |
| 26581 | ggcgccctcc  | aggactactc | caccgcgatg  | aattgggtca  | gcgccggggcc | ttctatgatt  |
| 26641 | tctcgagtta  | atgatatacg | cgcctaccga  | aaccaaatac  | ttttggaaca  | gtcagctctt  |
| 26701 | accaccacgc  | cccgcacaac | ccttaatccc  | agaaattggc  | ccgccgcctt  | agtgtaccag  |
| 26761 | gaaagtcccc  | ctcccaccac | tgtattactt  | cctcgagacg  | cccaggccga  | agtccaaatg  |
| 26821 | actaatgcag  | gtgcgcagtt | agctggcggc  | tccaccctat  | gtcgtcacag  | gcctcggcat  |
| 26881 | aatataaaac  | gcctgatgat | cagaggccga  | ggtatccagc  | tcaacgacga  | gtcgggtgagc |
| 26941 | tctccgcttg  | gtctacgacc | agacggaatc  | tttcagattg  | ccggctgcgg  | gagatcttcc  |
| 27001 | ttcacccttc  | gtcaggctgt | tctgactttg  | gaaagtctgt  | cttcgcaacc  | ccgctcgggc  |
| 27061 | ggaattcggga | ccgttcaatt | tgtagaggag  | tttactccct  | ctgtctactt  | caacccttc   |
| 27121 | tccggatctc  | ctgggcacta | cccgacagag  | ttcataccga  | acttcgacgc  | gattagcgag  |
| 27181 | tcagtggacg  | gtcagcattg | atgtctggtg  | acgcgggtga  | gctatctcgg  | ctgcgacatc  |
| 27241 | tagaccactg  | ccgcgccttt | cgctgctttg  | cccgggaact  | tattgagttc  | atctacttcg  |
| 27301 | aactccccaa  | ggatcacctt | caaggctcgg  | cccacggagt  | gcggattact  | atcgaaggca  |
| 27361 | aaatagactc  | tcgcctgcaa | cgaattttct  | cccagcggcc  | cgtgctgatc  | gagcgagacc  |
| 27421 | agggaaacac  | cacggtttcc | atctactgca  | tttgaatca   | ccccgattg   | catgaaagcc  |
| 27481 | tttgctgtct  | tatgtgtact | gagtttaata  | aaaactgaat  | taagactctc  | ctacggactg  |
| 27541 | ccgcttcttc  | aaccgggatt | ttacaaccag  | aagaacaaaa  | cttttcctgt  | cgtccaggac  |
| 27601 | tctgttaact  | tcacctttcc | tactcacaaa  | ctagaagctc  | aacgactaca  | ccgcttttcc  |
| 27661 | agaagcattt  | tccctactaa | tactactttc  | aaaaccggag  | gtgagctcca  | cggtctccct  |
| 27721 | acagaaaacc  | cttgggtgga | agcgggcctt  | gtagtactag  | gaattcttgc  | gggtgggctt  |
| 27781 | gtgattattc  | tttgctacct | atacacacgt  | tcttccactt  | tcttagtggt  | ttgtgggtat  |
| 27841 | tggtttaaaa  | aatggggccc | atactagtct  | tgcttggttt  | actttcgctt  | ttggaaccgg  |
| 27901 | gttctgccaa  | ttacgatcca | tgtctagact  | ttgaccacga  | aaactgcaca  | cttacttttg  |
| 27961 | caccgcacac  | aagccgcac  | tgtggagtgc  | ttattaagtg  | cggatgggaa  | tgcagggtccg |
| 28021 | ttgaaattac  | acacaataac | aaaacctgga  | acaatacctt  | atccaccaca  | tgggagccag  |
| 28081 | gagttccccg  | gtggtacact | gtctctgtcc  | gaggtccctg  | cggttccatc  | cgcattagta  |
| 28141 | acaacacttt  | cattttttct | gaaatgtgcg  | attctggccat | gttcagtgcg  | aaacagtatt  |
| 28201 | ctctatggcc  | tcctagcaag | gacaacatcg  | taacgtttct  | cattgcttat  | tgcttggtgcg |
| 28261 | cttgcccttc  | tactgcttta | ctgtgcgtat  | gcatacacct  | gcttgtaacc  | actcgcacac  |
| 28321 | aaaacgccaa  | taacaaagaa | aaaatgcctt  | aacctctttc  | tgtttacaga  | catggcttct  |
| 28381 | cttaccatct  | tcataattgt | cagcattgtc  | actgccgctc  | acggacaaac  | agtcgtctct  |
| 28441 | atcccaactg  | gacataatta | cactctcata  | ggacccccaa  | tcacttcaga  | ggctcatctg  |
| 28501 | accaaactgg  | gaagcgttga | ttactttgat  | ataatctgta  | acaaaacaaa  | accaaataa   |
| 28561 | gtaacttgca  | acatacaaaa | tcttacattg  | attaatgtta  | gcaaagttaa  | cagcgggttac |
| 28621 | tattatgggt  | atgacagata | cagtagtcaa  | tatagaaatt  | acttggttcg  | tgttaccacg  |
| 28681 | ttgaaaacca  | cgaaaatgcc | aaatatggca  | aagattcgat  | ccgatgacaa  | ttctctagaa  |
| 28741 | actttttacat | ctcccaccac | acccgacgaa  | aaaaacatcc  | cagattcaat  | gattgcaatt  |
| 28801 | gttgacgcgg  | tggcagtggt | gatggcacta  | ataataatat  | gcattgctttt | atatgcttgt  |
| 28861 | cgctacaaaa  | agtttctatc | taaaaaacaa  | gatctcctac  | taaggcttaa  | catttaattt  |
| 28921 | cttttttatac | agccatgggt | tccactacca  | cattccttat  | gcttactagt  | ctcgcaactc  |
| 28981 | tgacttctgc  | tcgctcacac | ctcactgtaa  | ctataggctc  | aaactgcaca  | ctaaaaggac  |
| 29041 | ctcaagggtg  | tcatgtcttt | tgggtggagaa | tatatgacaa  | tggatgggtt  | acaaaaccat  |
| 29101 | gtgaccaaac  | tggtagattt | ttctgcaacg  | gcagagacct  | aaccattatc  | aacgtgacag  |
| 29161 | caaattgacaa | aggcttctat | tatggaaccg  | actataaaag  | tagtttagat  | tataacatta  |
| 29221 | ttgtactgcc  | atctaccact | ccagcacccc  | gcacaactac  | tttctctagc  | agcagtgtcg  |
| 29281 | ctaacaatac  | aattttccat | ccaacctttg  | ccgcgctttt  | aaaacgcact  | gtgaataatt  |
| 29341 | ctacaacttc  | acatacaaca | atttccactt  | caacaatcag  | catcatcgct  | gcagtgacaa  |
| 29401 | ttggaatatc  | tattcttggt | tttaccataa  | cctactacgc  | ctgctgctat  | agaaaagaca  |
| 29461 | aacataaaag  | tgatccatta | cttagatttg  | atatttaatt  | tgttcttttt  | ttttatttac  |
| 29521 | agtaggtgta  | acaccaatca | tggtagctag  | aaatttcttc  | ttcaccatac  | ttcatctgtgc |
| 29581 | ttttaatgtt  | tgcgctactt | tcacagcagt  | agccacagca  | accccagact  | gtataggagc  |
| 29641 | atgttgcttc  | tatgcacttt | ttgcttttgt  | tacttgcatc  | tgcgtagtga  | gcatagtctg  |
| 29701 | cctgggtatt  | aattttttcc | aacttctaga  | ctggatcctt  | gtgcgaattg  | cctacctgcg  |

FIG. 11A-8



|       |             |             |             |             |             |              |
|-------|-------------|-------------|-------------|-------------|-------------|--------------|
| 29761 | ccaccatccc  | gaataccgca  | acaaaaatat  | cgcggcactt  | cttagactca  | tctaaaacca   |
| 29821 | tgcaggctat  | actaccaata  | tttttgcttc  | tattgcttcc  | ctacgctgtc  | tcaaccccag   |
| 29881 | ctgcctatag  | tactccacca  | gaacacctta  | gaaaatgcaa  | attccaacaa  | ccgtgggtcat  |
| 29941 | ttcttgcttg  | ctatcgagaa  | aaatcagaaa  | cccccccaa   | tttaataatg  | attgctggaa   |
| 30001 | taattaatat  | aatctgttgc  | accataatth  | catttttgat  | ataccccta   | tttgattttg   |
| 30061 | gctggaatgc  | tcccaatgca  | catgatcatc  | cacaagacc   | agaggaacac  | attccccac    |
| 30121 | aaaacatgca  | acatccaata  | gcgctaatag  | attacgaaag  | tgaaccacaa  | ccccactac    |
| 30181 | tccctgctat  | tagttacttc  | aacctaacgc  | gcggagatga  | ctgaaacact  | caccacctcc   |
| 30241 | aattccgccc  | aggatctgct  | cgatatggac  | ggccgcgtct  | cagaacaacg  | acttgcccaa   |
| 30301 | ctacgcatcc  | gccagcagca  | ggaacgcgtg  | gccaaagagc  | tcagagatgt  | catccaaatt   |
| 30361 | caccaatgca  | aaaaaggcat  | attctgtttg  | gtaaaacaag  | ccaagatatc  | ctacgagatc   |
| 30421 | accgctactg  | accatcgcct  | ctcttacgaa  | cttggccccc  | aacgacaaaa  | atttacctgc   |
| 30481 | atggtgggaa  | tcaaccccat  | agtttatcacc | caacaaagtg  | gagataactaa | gggttgctatt  |
| 30541 | cactgtcctc  | gcgattccat  | cgagtgcacc  | tacacctgc   | tgaagaccct  | atgctggccta  |
| 30601 | agagacctgc  | taccaatgaa  | ttaaaaaaa   | atgattaata  | aaaaatcact  | tacttgaaat   |
| 30661 | cagcaataag  | gtctctgttg  | aaatthtctc  | ccagcagcac  | ctcacttccc  | tcttcccaac   |
| 30721 | tctggtattc  | taaaacccgt  | tcagcggcat  | actttctcca  | tactttaaag  | gggatgtcaa   |
| 30781 | atthtagctc  | ctctcctgta  | cccacaatct  | tcattgtctt  | cttcccagat  | gaccaagaga   |
| 30841 | gtccggctca  | gtgactcctt  | caacctgtct  | tacccctatg  | aagatgaaag  | caactcccaa   |
| 30901 | caccctthta  | taaaacccagg | gtttatthtcc | ccaaatggct  | tcacacaaag  | cccagacgga   |
| 30961 | gttcttactt  | taaaatgttt  | aacccacta   | acaaccacag  | gcggatctct  | acagctaaaa   |
| 31021 | gtgggagggg  | gacttacagt  | ggatgacact  | gatggtacct  | tacaagaaaa  | catacgtgct   |
| 31081 | acagcaccca  | ttactaaaaa  | taatcactct  | gtagaactat  | ccattggaaa  | tggattagaa   |
| 31141 | actcaaaa    | ataaactatg  | tgccaaattg  | ggaaatgggt  | taaaatthta  | caacggtgac   |
| 31201 | atthgtataa  | aggatagtat  | taacacctta  | tggactggaa  | taaacccctc  | acctaactgt   |
| 31261 | caaattgtgg  | aaaacactaa  | tacaaatgat  | ggcaaactta  | ctthtagtatt | agtaaaaaat   |
| 31321 | ggagggtctg  | ttaatggcta  | cgtgtctcta  | gttgggtgat  | cagacactgt  | gaaccaaattg  |
| 31381 | ttcacacaaa  | agacagcaaa  | catccaatta  | agattatatt  | ttgactcttc  | tggaaatcta   |
| 31441 | ttaactgagg  | aatcagactt  | aaaaattcca  | cttaaaaaata | aatcttctac  | agcgaccagt   |
| 31501 | gaaactgtag  | ccagcagcaa  | agcctthtatg | ccaagtacta  | cagcttatcc  | cttcaacacc   |
| 31561 | actactaggg  | atagtgaaaa  | ctacattcat  | ggaaatgttt  | actacatgac  | tagttatgat   |
| 31621 | agaagtctat  | ttcccttgaa  | catttctata  | atgctaaaca  | gccgtatgat  | ttcttccaat   |
| 31681 | gttgcttatg  | ccatacaatt  | tgaatggaat  | ctaaatgcaa  | gtgaatctcc  | agaaagcaac   |
| 31741 | atagctacgc  | tgaccacatc  | cccctthtctc | tttcttata   | ttacagaaga  | cgacaactaa   |
| 31801 | aataaagtth  | aagtgttht   | atthaaaatc  | acaaaattcg  | agtagttatt  | ttgcttccac   |
| 31861 | cttcccattt  | gacagaatac  | accaatctct  | ccccacgcac  | agctthaaac  | atttggatatac |
| 31921 | cattagagat  | agacattgtt  | ttagattcca  | cattccaaac  | agtttcagag  | cgagccaatc   |
| 31981 | tggggtcagt  | gatagataaa  | aatccatcgc  | gatagtcttt  | taaagcgctt  | tcacagtcca   |
| 32041 | actgctgcgg  | atgcgactcc  | ggagtthtga  | tcacgggtcat | ctggaagaag  | aacgatggga   |
| 32101 | atcataatcc  | gaaaacggta  | tcggacgatt  | gtgtctcatc  | aaaccacaa   | gcagccgtg    |
| 32161 | tctgcgtcgc  | tccgtgcgac  | tgtgtthtat  | gggatcaggg  | tccacagtth  | cctgaagcat   |
| 32221 | gattthtaata | gcccttaaca  | tcaactthtct | ggtgcgatgc  | gcgcagcaac  | gtattctgat   |
| 32281 | ttcactcaaa  | tctthtgcagt | aggtacaaca  | cattattaca  | atattgtthta | ataaaccata   |
| 32341 | attaaaagcg  | ctccagccaa  | aactcatatc  | tgatataatc  | gcccctgcat  | gaccatcata   |
| 32401 | caaagthtta  | atataaatta  | aatgacgttc  | cctcaaaaac  | acactacca   | catacatgat   |
| 32461 | ctctthtggc  | atgtgcatat  | taacaatctg  | tctgtaccat  | ggacaacgtt  | ggttaatcat   |
| 32521 | gcaacccaat  | ataaccttcc  | ggaaccacac  | tgccaacacc  | gctccccag   | ccatgcatthg  |
| 32581 | aagtgaaccc  | tgctgattac  | aatgacaatg  | aagaacccaa  | ttctctcgac  | cgttgaatcac  |
| 32641 | ttgagaatga  | aaaatatcta  | tagtggcaca  | acatagacat  | aaatgcatgc  | atcttctcat   |
| 32701 | aattthtaac  | tcctcaggat  | ttagaacat   | atcccaggga  | ataggaagct  | cttgagaaac   |
| 32761 | agtaaagctg  | gcagaacaag  | gaagaccacg  | aacacaactt  | acactatgca  | tagtcatagt   |
| 32821 | atcacaatct  | ggcaacagcg  | ggtggtcttc  | agtcatagaa  | gctcgggtth  | cattthtctc   |
| 32881 | acaacgtggt  | aactgggtc   | tggtgttaag  | gtgatgtctg  | gcgatgatg   | tcgagcgtgc   |
| 32941 | gcgcaacctt  | gtcataatgg  | agttgtcttc  | tgacattctc  | gtattthtga  | tgcacaaacg   |
| 33001 | cggccctggc  | agaacacact  | cttcttgcgc  | ttctatctctg | ccgcttagcg  | tgthtccgtgt  |
| 33061 | gatagthtaa  | gtacagccac  | actcttaagt  | tggtcaaaag  | aatgctggct  | tcagthttaa   |
| 33121 | tcaaaactcc  | atcgcatcta  | attgthtctga | ggaaatcatc  | cacggtagca  | tatgcaaatc   |
| 33181 | ccaaccaagc  | aatgcaactg  | gattgcgtth  | caagcaggag  | aggagaggga  | agagacggaa   |
| 33241 | gaaccatgth  | aattthtatt  | ccaaacgatc  | tcgcagtact  | tcaaattgta  | gatcgcgcag   |
| 33301 | atggcatctc  | tcgccccac   | tgtgttggtg  | aaaaagcaca  | gctaaatcaa  | aagaaatgcg   |
| 33361 | atthtcaagg  | tgctcaacgg  | tggtcttcaa  | caaagcctcc  | acgcgcacat  | ccaagaacaa   |
| 33421 | aagaatacca  | aaagaaggag  | cattthtctaa | ctctcaatc   | atcatattac  | attctctgac   |

FIG. 11A-9

|       |            |             |            |            |             |            |
|-------|------------|-------------|------------|------------|-------------|------------|
| 33481 | cattcccaga | taatttttcag | ctttccagcc | ttgaattatt | cgtgtcagtt  | cttgtggtaa |
| 33541 | atccaatcca | cacattacaa  | acagggtccc | gagggcgccc | tccaccacca  | ttcttaaaca |
| 33601 | caccctcata | atgacaaaat  | atcttgctcc | tgtgtcacct | gtagcgaatt  | gagaatggca |
| 33661 | acatcaattg | acatgccctt  | ggctctaagt | tcttctttaa | gttctagtgt  | taaaaactct |
| 33721 | ctcatattat | caccaaactg  | cttagccaga | agcccccg   | gaacaagagc  | aggggacgct |
| 33781 | acagtgcagt | acaagcgcag  | acctcccca  | ttggctccag | caaaaacaag  | attggaataa |
| 33841 | gcatattggg | aaccaccagt  | aatatcatcg | aagttgctgg | aaatataatc  | aggcagagtt |
| 33901 | tcttgtagaa | attgaataaa  | agaaaaattt | gccaaaaaaa | cattcaaaac  | ctctgggatg |
| 33961 | caaatgcaat | aggttaccgc  | gctgcgctcc | aacattgtta | gttttgaatt  | agtctgcaaa |
| 34021 | aataaaaaaa | aaacaagcgt  | catatcatag | tagcctgacg | aacagggtgga | taaatcagtc |
| 34081 | tttccatcac | aagacaagcc  | acagggtctc | cagctcgacc | ctcgtaaaac  | ctgtcatcgt |
| 34141 | gattaaacaa | cagcaccgaa  | agttcctcgc | ggtgaccagc | atgaataagt  | cttgatgaag |
| 34201 | catacaatcc | agacatgtta  | gcatcagtta | aggagaaaaa | acagccaaca  | tagcctttgg |
| 34261 | gtataattat | gcttaatcgt  | aagtatagca | aagccacccc | tcgcggtatac | aaagtataag |
| 34321 | gcacaggaga | ataaaaaata  | taattatttc | tctgctgctg | tttaggcaac  | gtcgcccccg |
| 34381 | gtccctctaa | atacacatac  | aaagcctcat | cagccatggc | ttaccagaga  | aagtacagcg |
| 34441 | ggcacacaaa | ccacaagctc  | taaagtcact | ctccaacctc | tccacaatat  | atatacacia |
| 34501 | gccctaaact | gacgtaatgg  | gactaaagtg | taaaaaatcc | cgccaaaccc  | aacacacacc |
| 34561 | ccgaaactgc | gtcaccaggg  | aaaagtacag | tttcaacttc | gcaatcccaa  | caagcgtcac |
| 34621 | ttcctctttc | tcacggtacg  | tcacatccca | ttaacttaca | acgtcatttt  | cccacggccg |
| 34681 | cgccgcccct | tttaaccggt  | aaccccacag | ccaatcacca | cacggcccac  | actttttaaa |
| 34741 | atcacctcat | ttacatatgt  | gcaccattcc | atctataagg | tatattattg  | atgatg     |

FIG. 11A-10

| Vaccine<br>T=0, 4 wks                     | Vaccine<br>T=24 wks                       | Monkey<br>ID | Pre  |                  | T=4 wks |     | T=8 wks |     | T=24 wks |     | T=28 wks |     | T=32 wks |     |
|-------------------------------------------|-------------------------------------------|--------------|------|------------------|---------|-----|---------|-----|----------|-----|----------|-----|----------|-----|
|                                           |                                           |              | Mock | Gag <sup>a</sup> | Mock    | Gag | Mock    | Gag | Mock     | Gag | Mock     | Gag | Mock     | Gag |
| Ad34ΔE1gagΔE4Ad5Orf6, 10 <sup>11</sup> vp | Ad35ΔE1gagΔE4Ad5Orf6, 10 <sup>10</sup> vp | 00D016       | 4    | 6                | 1       | 84  | 5       | 334 | 5        | 99  | 0        | 306 | 3        | 244 |
| Ad34ΔE1gagΔE4Ad5Orf6, 10 <sup>11</sup> vp | Ad35ΔE1gagΔE4Ad5Orf6, 10 <sup>10</sup> vp | 00D044       | 1    | 1                | 8       | 79  | 0       | 374 | 8        | 138 | 0        | 493 | 1        | 253 |
| Ad34ΔE1gagΔE4Ad5Orf6, 10 <sup>11</sup> vp | Ad35ΔE1gagΔE4Ad5Orf6, 10 <sup>10</sup> vp | 00D064       | 4    | 6                | 1       | 125 | 8       | 655 | 6        | 145 | 0        | 351 | 1        | 238 |
| Naïve                                     |                                           | 00D087       | 1    | 1                | 3       | 3   | 8       | 54  | 6        | 8   | 5        | 5   | 3        | 0   |

FIG. 12

| Vaccine (T=0, 4 Wks)                      | Vaccine (T=24 Wk)                         | Monkey ID | IFN- $\gamma$ <sup>+</sup> CD4 <sup>+</sup> CD3 <sup>+</sup><br>per 10 <sup>6</sup> Lymphocytes |     | IFN- $\gamma$ <sup>+</sup> CD8 <sup>+</sup> CD3 <sup>+</sup><br>per 10 <sup>6</sup> Lymphocytes |      |
|-------------------------------------------|-------------------------------------------|-----------|-------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------|------|
|                                           |                                           |           | Mock                                                                                            | Gag | Mock                                                                                            | Gag  |
| Ad34ΔE1gagΔE4Ad5Orf6, 10 <sup>11</sup> vp | Ad35ΔE1gagΔE4Ad5Orf6, 10 <sup>10</sup> vp | 00D016    | 62                                                                                              | 433 | 176                                                                                             | 1288 |
| Ad34ΔE1gagΔE4Ad5Orf6, 10 <sup>11</sup> vp | Ad35ΔE1gagΔE4Ad5Orf6, 10 <sup>10</sup> vp | 00D044    | 136                                                                                             | 593 | 323                                                                                             | 1871 |
| Ad34ΔE1gagΔE4Ad5Orf6, 10 <sup>11</sup> vp | Ad35ΔE1gagΔE4Ad5Orf6, 10 <sup>10</sup> vp | 00D064    | 188                                                                                             | 785 | 292                                                                                             | 992  |

FIG. 13